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ABSTRACT

The present final report covers the various activities of the Center for Research on Language and Language Behavior at the University of Michigan at Ann Arbor during the final year of its cperatien before its clcsing on January 31, 1971. A prefatory section lists completed projects and the availability of individual reports. Included in this document are the following reports: (1) "Instructional Material for Intermediate Modern Hebrew," by E. A. Coffin and G. M. Schramm; (2) "The Role of Personality Variables in Second Language Learning," by A. Z. Guiora; (3) "Computerized Study of Syntax of Modern Literary Arabic," by E. McCarus and R. Rammuny; and (4) a report on the activities of CRLLB, 1965-1970, "The Center for Research on Language and Language Behavior: A Survey of Research," by B. Greene. The last report is followed by a listing of CRLLB progress reports, selected studies, completed doctoral dissertations, and publications. See AL 002 789-AL 002 793 for related documents. (AMM)

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FINAL REPORT

Contract No. OEC-0-9-097740-3743(014)

STUDIES IN LANGUAGE AND LANGUAGE BEHAVIOR, PHASE VI

Ronald Wardhaugh
Project Director

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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February 1, 1970 to January 31, 1971

Center for Research on Language and Language Behavior
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This report covers the various activities of The Center for Research on Language and Language Behavior during the final year of its operation before its closing on January 31, 1971. During that year a number of projects were brought to a successful conclusion and others were terminated at appropriate stages. The following listing indicates which projects were completed and where individual reports may be obtained:

I. Reports on completed activities available through the ERIC system:

A. July, 1970

Underachievement in College Foreign-Language Instruction
L. Feagans, E. Roeber, L. S. Barritt, and R. D. Tarte

Auditory vs. Articulatory Training in Exotic Sounds*
J. C. Catford and David B. Pisoni

Psycholinguistic Evidence for a Hierarchy of Syllable Structure
Sanford A. Schane and David Pisoni

Experimental Design on the Psychological Reality of a Natural Rule in Phonology
Sanford A. Schane and Bernard H. Tranel

B. January, 1971

Development of Computer-Assisted Observational Systems for Teacher Training
Guy C. Capelle, Robert J. Jarvella, and Eleanor Revelle

The Development of a Cantonese Course for Students Acquainted with Mandarin
James E. Dew

Knowledge of Results and Other Possible Reinforcers in Self-Instructional Systems
George L. Geis and Reuben Chapman

Specifications for the Design of a Test of Knowledge of Foreign Cultural Patterns
Frank Koen

Interaction between Prose Styles and Linguistic Developments in Arabic after World War II
Raji M. Rammuny

Psychological Studies in Bilingual Performances and Cross-Linguistic Differences
Klaus F. Riegel

*Also in The Modern Language Journal, 1970, 54(No. 7), 477-481.

II. Report on a completed activity published in a journal:

The effect of delayed comparison in the language laboratory on phoneme discrimination and pronunciation accuracy
C. R. Sisson, Language Learning, 1970, 20(No. 1), 69-88.

III. Reports of activities terminated at appropriate stages included in the following pages:

Instructional Material for Intermediate Modern Hebrew
Edna A. Coffin and Gene M. Schramm

The Role of Personality Variables in Second Language Learning
Alexander Z. Guiora

Computerized Study of Syntax of Modern Literary Arabic
Ernest McCarus and Raji Rammuny

IV. Report on activities of the Center for Research on Language and Language Behavior, 1965-1970, included in the following pages:

The Center for Research on Language and Language Behavior: A Survey of Research
Beth Greene

INSTRUCTIONAL MATERIAL FOR INTERMEDIATE MODERN HEBREW[1]

Edna A. Coffin and Gene M. Schramm

Center for Research on Language and Language Behavior
The University of Michigan

Reading materials and preparatory exercises were assembled in an Intermediate Hebrew Reader. These materials were drawn from current Israeli non-fiction literature and were prepared for the students of Modern Hebrew. The reading materials were organized in 26 reading lessons. Each reading section included two preparatory exercises. Exercise A extracted the core of active vocabulary from the reading selection and presented it with various morphological notations and alternate morphological forms. For each active vocabulary item, a series of illustrative sentences were composed to show the nuances of words and in some cases the various meanings of a single item. Exercise B consisted of a set of sentences paraphrasing the reading selection itself and breaking down the difficult syntactic structures. The untampered reading selection was then included. The reading selection was followed by some content questions designed to, whenever possible, stimulate a directed discussion of subject and other related matters, in the classroom.

Introduction and Background

In the last few years Modern Hebrew has gained an increasingly important place among foreign languages being taught in American universities. There are no adequate materials for teaching Modern Hebrew at the university level. There is a crucial need for instructional materials at both the beginning and intermediate levels. This project has been concerned specifically with the preparation of materials to be used in Intermediate and Advanced Modern Hebrew courses. The purpose of the principal investigators was to prepare a reader that would answer the needs of the student who is past the beginner's stage. This student, who has already been introduced to the basic features of Modern Hebrew, still faces a great deal of difficulty in acquiring a substantial vocabulary and in mastering the more complex syntactic structures of the language.

The textbooks which have been or might be used for teaching Hebrew at the Intermediate Level vary widely in approach and methodology. At present some universities are using the textbook Hebrew: A Basic Course by Joseph A. Reif and Hanna Lewinson, Foreign Service Institute, 1965. The textbook is designed for the foreign service and covers the equivalent of first- and second-year Hebrew. It was specifically designed for the needs of the foreign service and not for use in academic institutions. It is, therefore, mostly concerned with conversational skills and a core of vocabulary that would enable the American in diplomatic service to get along in Israel. (Included are such subjects as visits to the

barber shop, beauty shop, shoe repair service, etc., subjects which have little relevance to academic studies). This book uses the "direct" or "oral" approach to language which is very useful in the early stages of language learning but certainly does not meet the needs of students past the first few weeks of studying the language. Reading and writing skills are neglected. When language is taught at the university level these skills are very important. There is no attempt to introduce vocabulary relevant to the interests of the students.

Other books such as Elef Millim by Aaron Rosen, Achiasaf Publishing House, Israel, and a Textbook of Israeli Hebrew by Haiim B. Rosen, published at the University of Chicago, 1962, are not adequate and do not meet the demands stated above. The content of the readings in the above stated books ranges from trivial selections to those that are fairly acceptable. While some of these books contain an applicable core of vocabulary for the newcomer to Israel, they do not meet the requirements of the college student. The principal investigators decided, therefore, to undertake the task of gathering interesting reading materials in a reader alone with adequate exercises to prepare the student for these readings. The investigators assumed that the students using the materials would have completed the elementary phase of learning Modern Hebrew and would be familiar with the writing system, phonology, basic morphological and syntactic structures, as well as a minimum core of vocabulary. The specific objectives of the intermediate phase are: (a) to expand the active vocabulary of the student; (b) to deal with new structural items encountered in the readings; (c) to increase the student's proficiency in reading and composition; and (d) to increase his proficiency in speaking as well.

Procedure

May and June 1970 were spent collecting materials for the reading selections. These readings were selected from a large corpus of contemporary Israeli writings: books, journals, and newspapers. Many sources were scanned, and finally 26 articles were selected for their interest in content and readability. By and large the articles deal with area studies: Near East geography, Jewish history, language and literature, religion, social studies, archaeology, etc. No attempt was made to control vocabulary. Reading selections were arranged loosely in order of difficulty.

During June and July these 26 reading selections were prepared for the preliminary copy of the reader. An experimental format was prepared for the presentation of these reading selections (see Appendix A). For each selection of reading the investigators decided on a core of active vocabulary. The basis for choosing this core of vocabulary was that of relevance and frequency of occurrence. (This selection was not done "scientifically", but rather on the basis of teaching experience and native-speakers' intuition). Two sets of exercises were prepared for each reading selection. These exercises were intended to present the new key vocabulary items. The vocabulary items which were selected

were listed in the margin with morphological notations and with the principal morphological variations. Illustrative sentences were provided for each of the new vocabulary items. The sentences were constructed in order to indicate the principal nuances of each word.

The second exercise was prepared in order to facilitate the handling of complex syntactic structures within the selection. It serves as a more direct introduction to the article since it contains the actual content of the article in a simplified form. It is essentially a paraphrase of the original, breaking down complex syntactic structures.

Following these two sets of exercises, the reading selection itself is presented. The reading selection is not tampered with and the student is confronted with the same type of material to which an adult Israeli will be exposed. The lesson format contains content questions. These are designed to promote discussion in class and to further use the new vocabulary acquired in the lesson. These content questions can be used orally, or can form the basis for written exercises in class or outside. In August of 1970 tapes were prepared for the lessons included in the preliminary version of the Intermediate Reader. Since Modern Hebrew orthography does not indicate vowels, the problem of vocalization is indeed an enormous one for the student at either the second or third year of his study of Hebrew. The availability of tapes is essential not only for developing correct pronunciation and intonation, but also for correct readings of unvocalized texts. It is through the exposure to tapes of the written materials, as well as through rigorous exercises in grammar, that a student can hope to develop his reading skills and correct speaking ability.

The reading selections have not been selected for the final version of the reader. However, we expect to reduce the number of readings to 20 selections, and to keep approximately 80% of the materials chosen for the preliminary text, and substitute some of the less successful selections. The following selections are the ones contained in the preliminary version of the reader:[2]

1. Lesson 1: Israel in the Near East (geographical description)
2. Lesson 2: Flora and fauna of Israel
3. Lesson 3: Climate
4. Lesson 4: Communal Settlements in Israel
5. Lesson 5: Old Jerusalem
6. Lesson 6: The Western Wall
7. Lesson 7: Jerusalem (a description of the mood of the city)
8. Lesson 8: Israel in the World - geopolitical description
9. Lesson 9: "We All Dreamt of Excavating It" - an interview with Prof. Mazar, the archeologist in charge of the excavations of the southern wall.
10. Lessons 10 - 11: "The Girls Who Excavate" (who dig up clay) - a description of a group of volunteer archeologists.
11. Lessons 12 - 15: "Dialogue of Warriors" - interview with Israeli soldiers after the war also includes an article on a psychological study made on the basis of these interviews.

12. Lessons 16 - 17: History of the Jewish Communities in the United States (up to the 20th century)

13. Lesson 18: A Research on Yiddish Using a Computer

14. Lesson 19: The Dead Sea Scrolls
    a: Finding the scrolls
    b: Orthography and language of the scrolls

15. Lesson 20: Massada
    Yigael Yadin's first chapter of his famous description of the excavations in Massada, a historical introduction

16. Lessons 21 - 24: The Messianic Movement of Shabtai Zvi

17. Lessons 25 - 26: Kafka
    a: Kafka's works
    b: Biographical sketch

Testing the Preliminary Version of the Reader

From September through December 1970 some of the materials prepared during the summer of 1970 were tested in classes at the University of Michigan. Lessons 1 - 7 were used in the second year Hebrew class. Lessons 10 - 16 were used in the third year Advanced Hebrew class. An intermediate student also used some of the lessons for a self-study program with some amount of success.

The students in the second year class worked through both exercises with the aid of the tapes, and received extensive drill in class. After the completion of these introductory exercises their attention was turned to the original text. On the whole the second year students tended to think that the first exercise in each lesson (the introduction of new vocabulary with illustrative sentences) was too difficult and not terribly valuable to them. They complained that the sentences used to illustrate new vocabulary items themselves contained many unfamiliar words and were, therefore, difficult and did not serve the purpose for which they were intended. They felt that there was little return proportionate to their efforts. However, they did work under the handicap of not having an English translation for this exercise (such a translation was to be included in the final version). There was also a misconception that the sentences were to be mastered rather than gone 'once over lightly', in order to understand the various shades and nuances of the new items of vocabulary. In general, the second year students reacted favorably to the material included in the articles and found the subject matter interesting.

The third year students were exposed to the first exercise at home first and were given an English translation of all the illustrative

sentences. They also availed themselves of the tapes for the correct readings. These students found the exercises useful and stimulating, and commented that the sentences introduced them to a very valuable core of passive vocabulary as well. They did not like the attempt to introduce the lesson through Exercise B alone. The second exercise and the text were presented to them in the same manner as it was presented to the students in the second year. However, they did have additional follow up on vocabulary through various exercises--such as translation and composition based on the core vocabulary of each lesson. A lot of emphasis was put on the content questions, which served as a basis for excellent class discussions, both directly on the content of lessons and less directly on some directed conversations on matters related to the lesson presented. The students achieved an excellent command of new items of vocabulary. At the end of the semester the advanced students expressed a lot of satisfaction with their progress in the areas of reading, writing and vocabulary expansion.

Conclusions

The results of testing the materials gathered for the preliminary copy of the reader in classroom situations indicate that the general direction of the preparation of the reader is indeed the right one. The materials should have interesting content and should be relatively short, and the vocabulary should lend itself to other types of adult reading and conversation. The effectiveness of the format adopted for presenting these lessons varied greatly between the two levels of intermediate and advanced students. The usefulness of Exercise A is still a controversial issue, as it seems to serve the more advanced students better than the ones who had just finished one year of Hebrew. It is clear that it is necessary to meet the different demands of these two levels. Further experimentation in lesson formats is being planned for the coming year. It is possible that one set of preparatory sentences, which will include paraphrases as well as content related sentences, may prove to be actually a better solution than the two sets used in the preliminary text.

Some of the reading selections have proved redundant in vocabulary, and others have proved to be not as interesting as initially thought. However, with classroom experience the judgment of these materials is much sounder. A lot of work remains to be done in adapting the final 20 reading selections, which the investigators hope will be more varied than the ones assembled to date. Grammatical exercises, exercises in composition, and translation based on a core of active vocabulary should also be developed to further supplement the reading selections, and to further aid the student to control the new structures and vocabulary items. It is hoped that through a continuation of this project these goals will be realized.

Appendix A

Lesson 1.

Israel in the Near East

Exercise A

Active vocabulary	Sample Sentences
marbit (f.)	The tourists spent most of their time in Jerusalem.
rov. (m.)	Most of the time the tourists were in Jerusalem.
	The majority of the residents of Paris leave for their vacation in August.
	Most of Paris' residents leave on vacation in August.
kat (f.)	The Essenes' sect was known for its communal life.
kitot (pl.)	There are many denominations in the Christian religion.
	The Karaite sect believes only in the Tora's laws.
	In India there are several castes. (kitot)
zchut (f.)	Thanks to the grant, the investigator was able to finish his research.
bizchut li-zchut	One should mention to the credit of the lecturer that he knows his subject well. (relevance)
chashivut (f.)	The importance of the theory was discovered only years later.
chashivuyot (pl.)	The mayor is a man of importance (a prominent man)
hashpa'a (f.)	A teacher can have a great deal of influence on his students.
(hashpa'at.-dep.) (hashpa'ot (pl.)	The parents lost all influence over their son.
	In the artist's paintings one can recognize the influence of Picasso.

kalkala (f.) (kalkalat. d.)	The economic situation in an agricultural state depends on the yield of the harvest.
kalkalot (pl.) kalkali (adj.)	The economy is based to a great extent on natural resources.
n-g-' +b..	Everybody was full and nobody touched the food.
(qal.)	It is forbidden to touch the electric wires.
	The crowded cars (bumper to bumper) almost touched each other.
gvul (m.) gvulot (pl.)	Each political state has boundaries.
	Natural borders are rivers or mountains.
yachid (m.) yechida (f.)	Einstein was a genius - unique in his generation.
	The new book by Weisel is one of a kind (special)
	An only child is often spoiled.
	Only few were given the opportunity to see the guest.
sh-y-k (hitpa'el)	The workers in the plant (belonged to the labor organization).
	The painter Gauguin belonged to the Impressionaistic School.
	The number of people who are members of the extremist group is limited.
	(had faith) The father believed in the special talent of his son.
'-m'n (hif'il)	"A fool believes everything".
'emuna (f.) (emunat -)	The Jewish faith is different in its principle from the Christian faith.
'emunot (pl.)	Many people believe in superstitutions (superstitious beliefs)
	The Orthodox (Jews) believe in the coming of the Messiah.
masoret (f.)	Each nation has a tradition of its own.
Masorot (pl.)	The Tse'ada ("Walk-a-thon") in Israel has become a tradition.

A traditionalist (tradition-keeper) lives by the religious rules.

It is a tradition to eat unleavened bread on Passover.

rikuz (m.)
rikuzim (pl.)

The concentration of the inhabitants in Israel is in the cities.

The separation of institutions (powers) in the state was meant to prevent a centralization of power.

r-k-z
(hitpa'el)

The crowd gathered in the square for the event.

qadum (m.) adj.
qduma (f.)

In early days men lived in caves.

The Ancient man lived by hunting

Discrimination against minorities has its origin in prejudices ('early' 'pre' opinions)

achuz (m.)
achuzim (pl.)

Each student gets a discount of five percent in the new store.

The percentage of women in high offices is very low.

The salesman gets a commission from the value of the merchandise which he sells.

The percentage of the participants in the demonstration was nil.

h-w-h
(pi'el)

The number of young people constitutes a sizable percentage in the population.

The representatives of various nations (constitute) make up the United Nations Organization.

The students' strikes constitute a serious problem.

Lesson 1

Exercise B

Israel is situated in the Middle East.
The Middle East is also known as the Near East.
Most of the countries in the Middle East are located in Asia.
Not all of the countries in the Middle East are in Asia.
Most of them are in Asia.

The majority of the inhabitants of the Middle East are Muslims.
Most of the inhabitants are Muslims.
The minority of the inhabitants are Christians.
The Christians belong to various denominations.

Israel is a bridge between the countries of the Mediterranean.
Israel has historical importance due to its geographical location.
Israel has a strategic importance in the present.
In the past Israel had a strategic importance also.
Like in the past also in the present Israel has historic and
strategic importance.

Many Jewish communities existed in the countries of the Middle East.
The Jewish communities were large.
The communities were very influential
The Jewish communities had an influence on the economic life.
Most of the members of these communities immigrated to Israel.

With the establishment of the country many Jews immigrated to Israel.
Many of the members of these Jewish communities immigrated to Israel.
Israel has boundaries with four political states.
The neighboring states are: Lebanon, Syria, Jordan and Egypt.

Lebanon is located to the north of Israel.
In the northeast Israel touches Syria.
In the east the neighboring state of Jordan is located.
In the southwest is Egypt.
Egypt is the only state in the continent of Africa.
Egypt is the only one (of the Middle East countries) located in Africa.

Most of the inhabitants of the neighboring states are Muslims.
The language of the Muslims in the neighboring states is Arabic.
The Muslims mostly belong to the Sunni Tradition.
The Sunni sect is the largest one in the Islamic world.
The Muslims believe in the Quran.
They also believe in the Islamic Tradition.
The Islamic Tradition is called in Arabic: Al-Ḥadith.

Among the Muslims are also those who belong to the Shi'i Sect.
There are small communities of Shi'is in Lebanon and Syria.
The non-Sunni Muslims are in the majority Shi'is.
The Sect of the Mutawallis is a Shi'i Sect.

There are large communities of Druzes.
The birthplace of the Druze sect is Lebanon.

Christians also reside in the neighboring states.
The Christians belong to various denominations.
The Christian denominations in the Middle East are very ancient.
In Lebanon there is a large percentage of Christians.
Most of the Christians in Lebanon are Maronites.
The Maronite Sect is very close to the Catholic one.

The large Christian denomination in Egypt is the Coptic Church.
In Egypt there is a community of Christian Copts.
The Copts are Egypt's earliest inhabitants.
The Coptic Church is a unique one in the Christian's World.

Lesson 1.

Text

Israel is located in the Near East. Most of the Middle Eastern countries are in the continent of Asia with a majority of their residents being Muslims and a minority of the residents being Christians of various denominations. Due to its geographical location, Israel is a bridge between the countries of the Mediterranean, and in this lies its historical and strategic importance in the present as in the past.

In the countries of the Middle East there were large Jewish communities which were known for their influence, especially in the economic sphere. The members of these communities, for the most part, have immigrated to Israel with the establishment of the state.

Israel touches in its borders on four neighboring states. In the north--Lebanon, in the northeast--Syria, in the east--Jordan (in its official name: the Hashemite Kingdom of Jordan), and in the southwest--Egypt (in its official name: The United Arab Republic), which is the only state among these four in the continent of Africa.

The inhabitants of the neighboring states are for the most part Muslims and their language is Arabic. The majority of these Muslims belong to the Sunni Sect in the world of Islam, and they believe in the Quran and in all of the Muslim Tradition (al-ḥadith). In Syria and Lebanon there are small communities of non-Sunni Muslims like the

Mutawallis, and they are Shi'is. Among them (the non-Sunnis) are also large communities of Druzes in Lebanon--the birthplace of that sect--and in Syria, in Druze Mountain, which is the most important location of their concentration in the Middle East.

In the neighboring states are also Christians who are members of some of the earliest sects of Christianity. In Lebanon there is a large percentage of Christians who are mostly Maronites, who are closely related to the Catholics. In Egypt there is a very large community of Christian Copts and they are the earliest inhabitants of Egypt and they constitute a unique church in the Christian world.

Lesson 1.

Content Questions

1. What constitutes the importance of the State of Israel in the Middle East?

2. What are Israel's neighboring states?

3, Describe the various Muslim sects in the Near East.

4. Which countries contain important Christian communities? Describe the various Christian denominations in the Near East.

Footnotes

[1]The research reported herein was supported in part pursuant to Contract OEC-0-9-097740-3743(014) with the U. S. Department of Health, Education, and Welfare, Office of Education, under the provisions of P. L. 83-531, Cooperative Research, and the provisions of Title VI, P. L. 85-864, as amended.

[2]Further information about the reader can be obtained from the authors, Department of Near Eastern Languages and Literatures, The University of Michigan.

THE ROLE OF PERSONALITY VARIABLES IN SECOND LANGUAGE LEARNING[1]

Alexander Z. Guiora

Center for Research on Language and Language Behavior
The University of Michigan

This report pertains to the portion of the above project that was supported by the Office of Education through December 31, 1970. The research program continues with the support of the Department of Defense, and a final report on the completed project will be prepared by us and submitted to the Department of Defense sometime after July 1, 1971. Copies of that report will be made available to the Office of Education as well.

Pre-Contract Research

Guiora, Lane, and Bosworth (1967) examined the relationship between success in speaking a second language authentically (French) and a variety of personality dimensions. This study included the first use of the Micro-Momentary Expressions (MME) procedure for the measurement of empathy. It was hypothesized that an ability to perceive minimal interpersonal cues, standardized in this case by use of selected film strips shown at different speeds, would be related to individual differences in empathic ability. A significant relation (rank order correlation of +.60) was found between this measure and language proficiency.

A second study (Taylor, Catford, Guiora & Lane, 1969) introduced refinements in the MME apparatus, an alternate projective measure of empathy, and four independent measures of the facility of subjects (English-speaking) in learning authentic Japanese. The results indicated that MME and projective empathy score, together with an index of verbal intelligence, accounted for more than half of the variance in language performance, as indicated by a multiple correlation of +.72.

The promising results of these two laboratory experiments indicated the desirability of a larger-scale study of language learning under more realistic, and more demanding circumstances.

Methodology

Sample. The subject sample of our research project is being drawn from the United States Army Defense Language Institute, both East (DLIEC) and West Coast (DLIWC) branches. Students in this sample are studying one

of five different languages: Russian, Chinese-Mandarin, Spanish, Thai and Japanese.

Design. The data-gathering procedures consist of three phases.

Phase I involves the administration of two types of tests: paper and pencil measures which can be presented to a group of any size for which auditorium space is available, and the MME measure which is limited by the currently available apparatus to a sample size of N = 40 at any one time. These procedures are administered at the beginning of the language training program, usually no later than the first week of classes. The paper and pencil measures used in this phase include the following:

Thematic Apperception Test (TAT)
Photographic Perception Test (PPT)
Test of Ego-Rigidity
Literature Empathy Test
Wesman Classification Inventory
Prior Language Experience Form

The MME measure requires a 16mm audio motion picture projector and screen, a specially prepared test film, two Esterline Angus operation recorders, forty response switches and a forty cable system. The time required to administer all procedures in Phase I is 120 minutes, including instructions and collecting time.

Phase II consists of two procedures, the Linguistic Fluency Test (LFT) and the Predictive Empathy Test (PET). These two measures are administered in a language laboratory, in small groups consisting of class section, and can be accomplished in one 60-minute session per class.

The pre-recorded LFT is played simultaneously to each student in the section, through ear phones in each booth. Tape recorders in each booth record the stimulus sounds from the master tape, and the exact responses made by the student. These tapes will later be transcribed onto a single data storage tape. The PET requires only written responses.

Phase II procedures are administered approximately three months after classes have begun at DLI.

Phase III, the final aspect of data collection, consists of reports from DLI from student records of general mental ability test scores (AFQT) where available, and of final language proficiency evaluations for all students.

Testing to date. Phase I procedures were administered during the first week in July 1970 to a total of 153 DLI students. The second student input of DLIWC was similarly tested during the first week in

October 1970; while the input from DLIEC was tested during the first week in November 1970. Total input for the second cycle was N=169.

Phase II testing for students previously tested in Phase I was also accomplished during the first weeks in October and November 1970. Approximately 75% of the students previously tested were available.

The third cycle of testing at DLIWC is currently underway. Students who were administered the Phase I procedures in October 1970 are now being given the Phase II tests, and the new student inputs will be given the Phase I tests.

General Remarks

Two sources of attenuation of usable data samples have caused us some concern. One of these is general aptitude scores which have been available for only 59 or approximately 18% of students tested thus far. This problem is largely unavoidable it appears, although we hope for slightly larger returns on future inputs.

The other source of concern is that only 75 of DLI students tested in Phase I (July) reported for Phase II testing in October and November 1970. This appears to have been due partly to drop-out and reassignment rates, partly due to student factors (some students reported up to 30 minutes late for one-hour sessions), and partly due to conflicting assignments to other necessary duties. Again most of these missed cases are presumably unavoidable. In an effort to reduce their incidence somewhat, we have scheduled make-up testing sessions.

The final decision as to the number of student inputs to be tested will be made in the near future contingent upon the number of complete data cases obtained for each language in the next few testing sessions.

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Footnote

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COMPUTERIZED STUDY OF SYNTAX OF MODERN LITERARY ARABIC[1]

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This study is directed to the present outstanding need in the field of Arabic studies of a comprehensive description of the syntax of modern literary Arabic (MLA). The final product will be a book containing an analytic description of all the syntactic structures (clause-level and phrase-level) of post World War II Literary Arabic prose; the analysis will be based on a corpus of several hundred thousand words, to lend statistical validity to statements, chosen from the works of a large number of writers from the Arab world who are considered to be representative of good Arabic prose writing. By computer-storing an extensive corpus it becomes possible to retrieve all or any part of the occurrences of any particular feature under study, not only more speedily but also more accurately than otherwise. Further, the range of possible studies is extended. In their final form these data will serve as a research facility accessible to all researchers on Arabic in this country (or abroad) working on morphological, syntactic, lexical, or semantic studies, including those interested in contrastive English-Arabic studies and the preparation of teaching materials. Finally, the methodology may be of interest to linguists intending to pursue similar studies in other languages.

A. Goals

1. While there are many excellent works on the syntax of Classical Literary Arabic (i.e., Arabic written in the seventh to tenth centuries AD), there is no satisfactory work on the syntax of contemporary literary Arabic. A comprehensive treatment of MLA syntax, which is the outstanding need in the field of Arabic studies today, is the goal of this project. MLA is defined here as post-World War II narrative and expository prose written by those who are considered to be writers of most acceptable Arabic. Subsequent studies can compare narrative with journalistic styles, or prose with poetry, contemporary with classical, etc.

2. In order to achieve this goal, a total of one-half million words of text (i.e., the equivalent of approximately 20 books of 100 pages each) is to be examined. A corpus of this size should be fully representative of MLA prose, and will lend validity to statistical

statements. In order to handle a corpus of this magnitude, these texts are stored on a computer, permitting immediate retrieval of occurrences of any structure under study. A special system of annotating and coding has been devised which will permit the retrieval of information for the following kinds of studies: syntactic (both clause-level and phrase-level), morphological, lexical and semantic, including any combination of studies (see Appendix I: Illustrative Annotation Sheet). It is interesting to note that the annotation system adopted is easily translated into terms of either a transformational approach, with its rewrite rules, or a tagmemic approach, with its slot-and-filler arrangement. At the same time, conventional grammatical terms are employed, including certain technical terms peculiar to Arabic grammar.

It is expected that the impact of this approach will be felt in two areas. It will provide opportunities for other Arabists over the country to pursue more effectively their own research on Arabic, the preparation of instructional materials, etc. It will also provide a model for scholars who wish to pursue similar studies on other languages.

On completion of the analysis and description of MLA syntax, it will be feasible to do a contrastive analysis of English and Arabic syntax, then to pinpoint those features of Arabic structure most difficult for English speakers to master, and to experiment on the most effective ways to teach them.

B. Personnel

The principal investigators are Professors Ernest N. McCarus and Raji M. Rammuny of the Department of Near Eastern Languages and Literatures of The University of Michigan, who have worked on the project on a year-round basis since March 1969. In the summers of 1969 and 1970 they were joined by Professors Peter Abboud of the University of Texas and Wallace Erwin of Georgetown University, also Arabist-linguists.

The following have assisted in the project: four annotator-encoders, who transcribe and translate the Arabic text and analyze and encode the syntactic structures and the morphological and lexical data; a key-punch operator; and a programmer.

C. Procedures and Principles

The following results have been achieved (not necessarily in chronological order):

1. Selection of Texts.

Principle: This study should represent well-written Arabic prose, to serve as a basis of comparison with Arabic of other genres, e.g., journalistic or poetry; or of the other periods, e.g., nineteenth century or eighth century; or of various styles, e.g., archaizing vs.

innovative. By choosing writers who are generally considered to be representative of the main-stream of development of Arabic literary traditions, we are assured of a linguistic norm. To assure a balanced selection, we not only consulted standard references on modern Arab writers but sent a questionnaire to some 70 specialists in Arabic literature, most of them Arabs in the Arab world. Their response was remarkably uniform, including names of writers of various persuasions, e.g., Taha Hussain, Muhammad Hussain Haykal, Ahmad Amin and Mikhail Nuayma, who are purists in their language; Nagib Mahfouz, Yousuf Al-Sibai, Halim Barakat and Ihsan Abdul-Quddous, who have made Arabic literature today more available to the public by using a simple straightforward style which can be easily understood by most people; and some, like Mahmoud Taymour, in his recent book of essays Al-Shakhsiyyāt al-ᶜishrūn, Twenty Personalities, who, although they follow modern trends in MLA, still use a traditional, archaic style in terms of selection of vocabulary and structures.

In addition to the resources of the UM library and our own personal collections, we have purchased from Cairo and Beirut book dealers approximately 70 books for purposes of annotation.

Our selection of 38 authors from 13 Arab states includes representatives of seven literary genres and 16 different subjects, including literary criticism, short stories, novels, plays and essays and articles on history, religion, literature, etc.

2. Annotation of Texts.

Principle: Texts must be encoded to permit efficient retrieval of any of several kinds of information, by any of several investigators. Further, the encoding system must be so constructed as not to prejudice the ultimate analysis. The annotation system set up meets these requirements: it is one which encodes data in terms of their surface forms rather than their deep structure, and one which accommodates also traditional constructions such as hāl (the circumstantial clause), tamyīz (the adverbial expression of respect), al-mafᶜūl al-mutlaq, (the cognate accusative), etc. For every word the following information is given: its morphological form class (Col. 16--see Appendix I) and inflections, as well as certain semantic features (Col. 17); its syntactic role in the clause (Col. 1) or membership in a phrase in the clause (Cols. 2-15); its transcription, translation and additional lexical information (idiomatic phrases, words not found in the dictionary, emphasis, plural nouns that have no singular, aspects of verbs, etc. (Col. 18)). A special feature of our approach is the fact that every sentence in a selection is analyzed in this way, providing methodological rigor that is lacking in an introspective approach not based on a discrete corpus. That is, if the investigator uses himself as the source of data, he will overlook a vast array of unusual but normal constructions that occur in live language, written or spoken.

The annotation system has been perfected in such a way that additions, deletions or changes can be made at any point. Four annotators have been trained, and over 300 pages of text have been annotated. This annotation system was developed in consultation with a programmer, who also prepared the storage program as well as retrieval programs. The key-punch operator has punched approximately 5,000 words. The programmer has programmed the material and has prepared the retrieval system.

3. Analysis of Selected Features.

Concurrent with the development of the annotation system, certain features of MLA syntax were studied on the basis of direct scanning of texts which had not yet been computer stored. The primary value of these studies has been to help evaluate and validate the annotation system; they will also serve as a control when these same features are studied on the basis of retrieval from computer storage. These studies also have value as independent studies providing new insights as well as additional data, and some have been submitted as articles to various technical journals or given as papers at professional society meetings. Some features studied are: (1) negation of verbs in MLA: lam plus jussive has largely replaced lammā plus jussive, which is now rare. It is also far more common than mā plus perfect, which seems to connote special emphasis or denial of the preposition as a whole. (2) Conditional sentences: it is well-known that 'idhā 'if' and 'in 'if' both introduce possible conditions as opposed to law 'if' which introduces contrary-to-fact conditions; it is now clear, however, that 'idhā implies likely conditions, while 'in conditions tend to question the likelihood of realization. (3) hāl constructions: studies on the hāl show that MLA continues to use the major patterns of Classical Arabic, e.g., the sentential hāl as exemplified by yuhāsibūnanā ᶜalā al-ᶜamali yusi'ūna tafsīrahu 'They take us to task over our work, having misinterpreted it', as well as its variants; also found are certain other patterns such as a definite hāl, e.g., waḥdahu 'alone'. Certain constructions found in Classical Arabic are no longer used, such as a hāl which refers to a clause as a whole rather than a single word, e.g., ḏhālika al-kitābu lā rayba fīhi 'That is the Book; there is no doubt about that', while some (rare) innovations over Classical Arabic occur, such as a hāl in initial position in the sentence, e.g., wa baghtatan... 'and suddenly...' Finally, it is apparent that hāl must be studied in relation to (a) restrictive and non-restrictive relative clauses and (b) prepositional phrases that have the meaning of hāl's, e.g., mashā bisurᶜa and mashā musriᶜan 'He walked quickly', relationships not considered by Arab grammarians. (4) Style: While style is not a primary concern of this research, it is obvious from our studies that the definition of "conservative" writers, such as Taha Hussain and Muhammad Hussain Haykal, must be revised. They are not conversative in that they are archaizing--that is, using constructions peculiar to Koranic and Classical Arabic--but in that they are purists--rejecting colloquialisms and foreign expressions, but writing within the framework

of MLA. There are writers who resort to archaic constructions such as Mahmoud Taymour in his book of essays al-shakhsiyyāt al-ᶜishrūn, Twenty Personalities, but this appears to be a relatively rare phenomenon. It is also worthy of note that if a given construction has several alternate forms in Classical Arabic, MLA tends to avoid those which are ambiguous or vague.

These studies have been invaluable in assuring that the annotation system we have devised does indeed provide the necessary flexibility, efficiency and thoroughness in the retrieval of data.

D. Summary of Progress

Selection and collection of data.
Development and testing of an annotation system.
Programming of the annotation system for computer storage.
Preparation of a retrieval program
Analysis and annotation of approximately 300 pages of text.
Key-punching of approximately 5000 words.
Studies of selected problems in MLA syntax, some of which have been submitted as articles in professional journals.

Footnote

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Appendix I

Illustrative Annotation Sheet: Explanation

NB: Lines are horizontal while columns and spaces are vertical. In keypunching, each line is punched on a separate card.

Line Ø: Identificational data - Taymour's first book under study. Selection 1, sentence number 15, page 10, line 14, an essay, book published in 1969, author is Egyptian; initial of annotator and data annotation completed; initials of checker and date.

The Arabic sentence transcribed and translated (Col. 18) is wa tilka hiya l-lamaana l-kubraa llatii tunaatu bihamalati l-mashaa^{c}ili fii l-lumami l-nawaahidi..'And that is the greatest trust that is entrusted to carriers of torches among developed nations...' The sentence consists (Col. 1) of a clause connector W, a subject S, a pronoun of separation F, and a predicate P. The first three functions are performed by individuals words which are identified in Col. 16: W = a coordinating conjunction CNC, S = a demonstrative pronoun that agrees with the fourth word in this sentence DØ4, and F = a pronoun that agrees with the second word of this sentence PØ2. The predicate consists of a noun phrase BN - EN (Col. 2) beginning on line 4 and ending on line 13. This noun phrase contains as its head a verbal noun VBN (Col. 16), a modifying elative adjective ELA (Col. 16) and a modifying relative clause beginning on line six BR (Col. 3) and ending in line 13. This relative clause itself is a clause analyzed in Col. 4 as consisting of a subordinator 8 (which is identified in Col. 16 as a relative pronoun agreeing with the fourth word in this sentence RØ4), a verbal element V (identified as a verb VØ4 in Col. 16), and a prepositional phrase containing the object of the verb J; Col. 5 shows that J is a prepositional phrase BP - EP containing a preposition PRP (Col. 16) whose object is a noun phrase BN - EN (Col. 6), and Col. 7 shows that this noun phrase consists of a genitive construct (BG-EG) as head and a modifying prepositional phrase BP - EP; the object of the preposition is a noun phrase BN - EN (Col. 8) which consists of a noun NOU and an active participle ACP. Thus, Col. 1 lists the functions in the clause, while Cols. 2 - 15 identify constituent phrases and embedded clauses. Col. 16 identifies the word class of each word in the sentence.

Col. 17 notes the inflections of words, e.g., NFS = nominative, feminine, singular (line 2); and certain semantic features, e.g., H (space 34) = human referent. PIFS3 (line 7) = passive voice P, indicative mood I, feminine F, singular S, third person 3 (verb); and GM 3Ø (line 1Ø) means genitive, masculine, plural (broken plural pattern number 3Ø). Other semantic features noted in space 34 are negative word, place name, personal name, divine referent, animateness and ordinal numeral.

In Col. 18 of this illustration the following kinds of data are included:

Transcription of Arabic word, e.g., WA.

Translation of Arabic word (following quotes), e.g., WA"AND.

Dictionary (citation) form of the word (following the symbol &), e.g., TILKA&6AALIKA (that is, the word TILKA would be found in the dictionary under 6AALIKA. This will permit word frequency counts, etc.

Translation aids:

(1) While each word is translated as a single word as far as is possible for that context, words in parenthesis are added if they help make possible a smoother English translation of the sentence as a whole, e.g., CARRIERS (OF). These are generally a function of the syntactic structure.

(2) The symbol @ indicates that a word (usually following) should be inserted here, e.g., THE @ TRUST (line 4) plus GREATEST (line 5) gives "the greatest trust".

Aspect of verb, e.g., = H (line 7) indicates that this verb is being used with habitual meaning; such data will facilitate the study of tense and aspect in verbs and participles.

Lexical units--the colon: signifies that this word together with the word whose number follows the colon constitute a lexical unit (an "idiom") and together give the meaning indicated on this line.

Punctuation--The actual punctuation of the text is reproduced here, usually with the word it follows; thus, this sentence ends with ,...(line 13). This will permit studies on the relationship of punctuation marks to syntactic structures.

Other data included are: usages not found in Han Wehr's Dictionary of Modern Written Arabic; any syntactic device used to connote emphasis.

	CLAUSE FUNCTIONS	COLS. 2 - 15: CONSTITUENT STRUCTURES														WORD CLASS	WORD INFLECTION	LEXICON
COLUMNS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SPACES:	1	2 3	4 5	6 7	8 9	10 11	12 13	14 15	16 17	18 19	20 21	22 23	24 25	26 27	28 29	30 31 32 33	34 35 36 37 38	39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72
LINES: 0	S	T A Y	I S	1			1 5			1 0 1 4	E S	S A Y		1 9	6 9	U A R		J S R 2 4 M A Y 7 0 P F A L 0 J U L 7 0
1	W															C N C		W A "A N D
2	S															D 0 4	N F S	T I U K A 6 6 A A L E K A " T H A T
3	F															P 0 2	N F S	H I Y A " I T
4	P	B N														V B N	N F S	L - ? A M A A N A "(I S) . T H E . P . T R U S T
5																E L A	N F S	L - K U B R A A 6 ? A K B A R "G R E A T E S T
6			B R 8													R 0 4	N F S	L L A T 1 1 & L L A 6 1 1 " T H A T
7				V												V 0 4	F I F S 3	T U N A A P U 6 ? A N A A P A = H " : 8 . I S E N T R U S T E D . TO
8				J	B P											P R P		B I " S E E . 7
9						B N	B G									A C P	H G M 0 9	7 A M A I A 6 7 A A M I 1 " C A R E T E R S . (P F)
0							E G									N O U	G M 3 0	L - M A S A A 9 1 6 M A S 9 A U " T O R C H E S
1							B F									P R P		F I 1 " A M O N G
2								B N								N O U	G F 0 1	L - ? U M A M 6 ? U M M A " N A T I O N S
3		E N E R		E P E N	E P E N	E P E N										A C P	G M 3 0	L - N A W A A 7 I E 6 N A A 7 I E . . . . " D E V E L O P E D
4																		
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Appendix II

الترابط بين الاساليب النثرية والتطورات اللغوية في العربية
* بعد الحرب العالمية الثانية

راجي الرموني

جامعة مشيغان

لهذا المقال غايتان : الاولى منهما استعراض الاساليب النثرية المستعملة في العربية الفصحى في فترة ما بعد الحرب العالمية الثانية • وثانيهما محاولة تفسير ما نلاحظه من ارتباط بين هذه الاساليب النثرية والتطورات التي اصابت النثر العربي من ناحية الشكل والمضمون في هذه الفترة •

وقبل البدء في الموضوع ، اود ان اذكر بأن هذا المقال مبني على دراسة لغوية يقوم بها معهد الابحاث في اللغة والسلوك اللغوى Center for Research on Language and Language Behavior التابع لجامعة ميشغان في الولايات المتحدة الامريكية • وتهدف هذه الدراسة الى معرفة التطورات النحوية التي طرأت على النثر العربي في الثلاثين سنة الاخيرة • ويشترك فيها الاساتذة التالية اسماؤهم : الدكتور ارنست مكاريوس من جامعة "ميشغان" والدكتور والاس ايرون من جامعة "جورجتاون" والدكتور بيتر عبود من جامعة "تكساس" ، بالاضافة الى كاتب هذا المقال • ومن الجدير بالذكر اننا قمنا بهذه الدراسة وفق الاسلوب العلمي ، فلقد بعثنا نستشير بعض الاساتذة والمختصين في اللغة العربية وادابها في الولايات المتحدة والعالم العربي ، طالبين منهم تزويدنا باسماء ٤٠ كاتبا عربيا مشهورا من كتاب النثر الذين يمثلون فترة ما بعد الحرب العالمية

*Article submitted for publication in a Lebanese literary journal; translation follows.

الثانية ، مع ذكر اهم موءلفات كل كاتب يذكرون اسمه • وقد ضمت القوائم التي تسلمناها اسماء كتاب ناشرين من معظم انحاء العالم العربي ، كما اشتملت على موءلفات تمثل شتى انواع النثر العربي الحديث : كالقصة والاقصوصة والرواية التمثيلية والنقد والخطابة والصحافة والتراجم والمقالة بانواعها الادبية والاجتماعية والسياسية ، الى غير ذلك من الموضوعات الفلسفية والتاريخية والعلمية والفنية والدينية التي نمت في هذه الفترة •

واستنادا على هذه القوائم ، وقع اختيارنا على ٣٦ كاتبا يمثلون ١٢ قطرا عربيا ، كما اخترنا ما بين كتاب الى ثلاثة كتب لكل موءلف ، معتبرين في ذلك اهمية الكاتب وشهرته والمواضيع الادبية التي يتميز بها • وبذلك توفر لدينا عدد من الكتاب والكتب يمثل الفترة التي نود بحثها تمثيلا صحيحا وعادلا •

ومنهجنا في البحث هو تحليل ما لا يقل عن ٢٥٠٠ صفحة من النثر وتصنيفها تصنيفا لغويا دقيقا يعتمد على وصف شامل لكل جملة مع مركباتها المرتبطة بعضها مع بعض وكذلك مفرداتها • وتتميز دراستنا هذه باستعمال الطرق والاجهزة العلمية الحديثة في تحليل وجمع المعلومات المراد دراستها ؛ اذ بعد القيام بعملية التحليل اللغوى الدقيق ، تخزن المواد المحللة في الة محصية (computer) تقوم بعدها باعطائنا ما نريد دراسته من تراكيب نحوية وغيرها ، بعد تصنيفها وفرزها لنا بالطريقة التي تناسبنا •

وقد كشفت لنا بعض الكتابات النثرية التي تم تحليلها حتى الان عن استعمال ثلاثة انواع من الاساليب في النثر العربي الحديث • ولا بد لي قبل التحدث عن هذه الاساليب ان اوضح بان

التقسيم بينهما مقصود منه التعميم والشمول لا غير ؛ حيث انه من الصعب في هذه الفترة تصنيف الاساليب او الكتاب تصنيفا قاطعا او وضع حد فاصل بين كل اسلوب وآخر ، بسبب كثرة تداخل هذه الاساليب بعضها في بعض واستعمال الكتاب في كثير من الاحيان لاكثر من اسلوب معين ، كما سنرى فيما بعد • وهذه الاساليب هي :

١• الاسلوب السهل الحديث الذى تغلب عليه البساطة وحرية التعبير • ويستخدم هذا الاسلوب الجمل والتراكيب السهلة التي تشتمل على لغة مبسطة قريبة من مفاهيم العوام • وهدفه الرئيسي من ذلك وصف الحياة الواقعية على طبيعتها والتعبير عنها بحرية وانطلاق • كما انه يستعمل احيانا الالفاظ والعبارات العامية او الاجنبية المألوفة ، قاصدا من وراء ذلك تثقيف الجماهير الشعبية وخدمة مصالحه • وقد اصبح هذا الاسلوب شائعا اليوم خاصة بين طبقة الكتاب الناشئين ، وفي المؤلفات التي ظهرت اخيرا لبعض الكتاب الذين ظهروا قبل الحرب العالمية الثانية ولا يزالون يكتبون حتى اليوم ، امثال يوسف السباعي ، احسان عبدالقدوس ، توفيق الحكيم •

وخير مثالين لهذا النوع من الاسلوب القطعتان التاليتان • القطعة الاولى مختارة من كتاب "نحن لا نزرع الشوك" للاديب يوسف السباعي (الجزء الاول ، ص ٢٨٢ ، ١٩٦٨) :

"ولم تطل جلسة سيدة بجوار ام عطوة •• ونهضت تودعها قائلة:

ـ كتر خيرك يا خالتي ام عطوة •

ومدت ام عطوة يدها بقطعة من الحلوى وهي تجيب قائلة:

ـ الله يعافيكي يا بنتي •• خذي هذه على ما قسم•

ـ كتر خيرك يا خالتي ام عطوة •

واحست سيدة انها تود ان تمنح ام عطوة شيئا ولكنها

كرهت ان تجرح شعورها باعطائها ثمن الحلوى . فمدت يدها الى الفجل قائلة:

– عايزة حزمتين فجل يا خالة .

– خذى ما تريدين يا بنتي .

واخذت سيدة حزمتي الفجل ووضعت يدها في جيبها واخرجت قرشا من العيدية التي منحها اياها اهل البيت .

وتساءلت ام عطوة في استنكار :

– ما الذى تفعلينه يا سيدة؟

– ثمن الفجل يا خالتي ام عطوة .

– عيب يا سيدة .. عيب يا بنتي .

– لم يا خالة ؟ .. لقد اخذت ثمنه من الذين اعمل عندهم ويجب عليك ان تأخذيه ..

– والنبي ما يستهلوا .. دول حزمتين فجل .

– خذي يا خالتي ام عطوة .. ده عرقك .."

والقطعة الثانية مختارة من كتاب "انا حرة" للكاتب احسان عبدالقدوس (الطبعة الثالثة ، ص ٥٣ – ٥٤ ، ١٩٥٨):

"وجاء احد الطلبة – طلبة الجامعة – وجلس بجانبها على مقعد الحديقة وقال كانه صديق قديم :

– حضرتك في اي كلية ؟

ونظرت اليه والى ياقته العالية وطربوشه الطويل وقالت وكانها تتحدى :

– انا مش في كلية .. انا مش في الجامعة خالص!

وقال وهو يحاول ان يبدو خفيف الدم :

– انا كمان قلت مش ممكن واحدة بالجمال ده تدخل الجامعة .. اللي عندنا كلهم بعيد عنك نقاوة .. اللي ما تنفعش للجواز يدخلوها الجامعة!

ولـم تـرد ، وادارت راسـها عنـه لتخفي اشـمئزازهـا ·· لقـد كـانت تعتقد ان طلبة الجامعـة ارقـى فـي عقليتهـم من ان يتفوهوا بمثل هـذا الغـزل الرخيص ، وكانت تعتقد ان بنـات الجـامعة اكثر احتـراما بين زملائهـم من ان يقـال عنهن هذا القـول !

وعـاد يسـالهـا :

ـ امـال حضرتـك بتروحـي مدرسـة ايـه ؟··

ولـم تـرد ايـضا ، فقـال :

ـ مـا دام شـايلة شـنطة تبقي لازم بتـروحـي مدرسـة ··

وقـالت متهكمـة :

ـ يـا سـلام علـى النبـاهـة !

ـ ولسـه يـامـا حتشـوفـي من نباهتـي ، بس قوليلـي المدرسـة تبقى فين وانـا اقولك علـى طـول اسـمهـا ايـه ··

ـ وليـه التعب ده كلـه ·· اسـمهـا مدرسـة السـنية ·"

وتمثل لنـا هـاتـان القطعتـان الخطوات الواسـعة التـي خطـاها الاسـلوب السـهل للوصول الـى مفاهيـم الجمـاهيـر الشـعبية عن طريق اسـتعمال لغـة بسـيطة وواضحة كل الوضوح · ومن الملاحظ هنا ان هـذا النوع من الاسـلوب يسـتعمل المفردات والتعـابير العـامية والاجنبيـة على حـد سـواء لاظهـار الشـخصيـات والحوادث علـى طبيعتهـا · وهـذا ممـا زاد فـي سـلاسـته وسـهولة فهمـه ·

٢· الاسـلوب الوسـط النقي الذى يلتـزم حـد الاعتـدال من نـاحيـة اختيـار المفردات وصيـاغـة العبـارات والجمـل · ويهـدف هـذا الاسـلوب بشـكل عـام الـى تخليص النثر العـربـي الحديـث مـن الاعتمـاد على العقـائـد والعواطف ، ومـا تجر اليـه مثـل هـذه الامور من اسـتعمال اسـلوب السـجع والزخرف التقليـدي · اذ انـه بدلا من ذلك يسـتعمل لغة عربيـة سـليمة صـافيـة لا يشـوبهـا كثيرا اسـتعمال العـاميـة او العبـارات الاجنبيـة كالاسـلوب السـهل ·

ولما كان اصحاب هذا الاسلوب يحاولون دائما ايجاد نوع من التوازن بين الشكل والمضمون ، فقد جاء اسلوبهم خاليا من التراكيب اللغوية المعقدة التي تعتمد على المحسنات البديعيه وكذلك التراكيب العربية الضعيفة او الاجنبية التركيب • وانصار هذا الاسلوب هم مزيج من الكتاب الذين ظهروا ونضجوا قبل الحرب العالمية الثانية وظلوا يكتبون بعدها ، وبعض الكتاب الذين ظهروا بعد الحرب ، ومنهم : طه حسين ، ميخائيل نعيمة ، احمد الزيات ، عباس العقاد ، مارون عبود ، احمد امين ، محمد حسين هيكل ، سهيل ادريس ، نازك الملائكة ، ساطع الحصرى ، وبعض كتابات نجيب محفوظ و محمود تيمور •

ومن النثر الحديث الذى يتميز بجودة لغته وحسن تعبيره وعنايته بالشكل والمضمون معا النموذجان التاليان • فمن كتاب "اديب" للدكتور طه حسين (ص ١٤٧ ، ١٩٦١) ما يلي :

"انا اكتب لك من باريس بعد ان اقمت فيها اقامة الساكن المستقر لا اقامة الزائر الملم • فقد زرت باريس في الصيف ، لكني لم اقم فيها الا يومين اثنين لقيت فيهما مراقب البعثة وعرفته بنفسي ، وقلت له وسمعت منه ، ثم استاذنته في ان اترك باريس حتى ينقضي الصيف • ولم ير في ذلك بأسا ، ولعله راى فيه خيرا ! فقد كان يحب الا القى المصريين لاول عهدي بفرنسا ليصح تمريني على اللغة ويحسن حديثي الى اهلها وفهمي عنهم • وقد زعمت له اني احب ان اعود الى ساحل البحر الابيض المتوسط لان جوه قريب من جو مصر ، فلم ينكر ذلك ولم ير به بأسا ، ولكنه نهاني عن مارسيليا وزين لي مدينة قريبة منها على ساحل البحر ايضا هي مدينة "كان" • فاظهرت الطاعة له والقبول لرأيه • والغريب انه منحني اجر السفر على حساب الجامعة للذهاب والاياب •

وتركته وتركت باريس ! ولكني لم اذهب الى "كان" ولم انزل في الفندق الذى سماه لي من فنادقها الا بعد ان مررت بمرسيليا .. واقمت في فندق جنيف اياما ، واستوثقت من اني لن اكون وحيدا في "كان" .

ولم لا ؟ ان لفرنند وان كانت خادما الحق في ان تستريح وتصطاف كما يستريح السادة ويصطافون . وما يمنعها ان تستريح وتصطاف اسبوعين حيث استريح انا واصطاف !!"

ومن كتاب "بيت سيء السمعة" لنجيب محفوظ (ص ٢١٨ ـ ٢١٩ ، ١٩٦٥) القطعة التالية :

"دخل حسن من احد الابواب فتخبطا طويلا من حجرة الى ممر ومن ممر الى سرداب ومن سرداب الى نفق ، وتيار الحائرين يصادفهم في شتى الاتجاهات . ولم ينقطع لحظة واحدة الضحك او الغضب او التعليقات . وتوقفت سعاد وهي تقول في رجاء :

ـ لنرجع .

فضحك قائلا :

ـ ماذا يعني الرجوع او ماذا يعني التقدم ؟ .. نحن نسير فحسب !

ـ الا تذكر من اين اتيت ؟

ـ كلا .

ـ وطبعا لا تدرى اين تذهب ؟

ـ هذا واضح .

وهي تتنهد :

ـ تعبت وضجرت .

ـ نحن معا وفي هذا ما يكفي .

ـ الا تسمع اصوات الغيظ ؟

– واصوات الضحك ؟

– سننتخبط حتى موعد الاغلاق .

– سر اللعبة لا يمكن ان يعرف في اول جولة فليس امامنا الا ان نجرب حظنا" .

من ابرز ما نلاحظه في هذين النموذجين وامثالهما استعمال لغة عربية صافية قادرة على التعبير عن افكارنا ومشاعرنا بدون تكلف زائد في اللفظ او المعنى ، وبدون ان تنزل الى مستوى اللغة العامية او ما يقاربها . فكأن اصحاب هذا الاسلوب يريدون رفع مستوى القراء الى اللغة الوسطى التي يستعملونها . ومما يجدر ذكره هنا انه بالرغم من ان معظم كتاب هذه الفترة التي نحن بصددها يحاولون نوعا ما تسهيل لغتهم وجعلها في متناول الجميع ، الا اننا لا نزال نجد هذا الاسلوب الوسط شائعا اكثر واصحابه لا يزالون في الطليعة . فقد تصدرت القوائم التي تسلمناها اسماء بعض الكتاب الذين يكثرون من استعمال هذا الاسلوب دون غيره ، مثل : طه حسين ، ميخائيل نعيمة ، محمود تيمور ، احمد امين ، سهيل ادريس ، وغيرهم .

٠٣ الاسلوب المُتَكَلَّف المجدّد الذى تسيطر عليه الزخارف اللفظية والمحسنات البديعية . وتكثر في هذا الاسلوب الجمل والتراتيب التي تشتمل على التشابيه والمجازات الى غير ذلك من الامور التي يستعملها الكاتب لاغراض بلاغية وبيانية . ومع ان هذا الاسلوب لا يزال يسير على نموذج اسلوب السجع والبديع التقليدي ، باستعماله اللغة المحشوة بالالفاظ المختارة والدلالات المبهمة والعبارات الرصينة ، الا انه متاثر بالتيارات الكتابية الحديثة ، خاصة فيما يتعلق بالتحليل النفسي والاجتماعي والوصف الدقيق واستعمال التنقيط حسب المعنى دون التقيد بالقواعد

التقليدية المرسومة • ومن مميزات هذا الاسلوب استعمال التراكيب اللغوية البليغة ، ومحاولته احياء بعض المفردات العربية القديمة ، وتوسيع باب الاشتقاق في اللغة • وقد اصبح هذا النوع قليل الاستعمال لدرجة ملحوظة في هذه الايام ، اذ انني لم اعثر حتى الان الا على كتاب واحد يمثل هذا النوع من الاسلوب ، وهو كتاب "الشخصيات العشرون" لمحمود تيمور (١٩٦٩) • ومن الكتاب المذكور القطعتان التاليتان • يصف محمود تيمور في القطعة الاولى (ص ٩ ــ ١٠) لطفي السيد بقوله :

"انه فكرة اكثر منه جسدا ، وعقل اكثر منه مادة ، وقوة تحس اكثر منه خلقا يلمس•••

انه ادنى شبهها الى الخط المستقيم الذي هو اقرب بعد بين نقطتين • ولكنه ليس بالخط السطحي ، يجري به المداد على القرطاس•••

هو خط متغلغل يصل الى اعمق الاغوار من الفكر الانساني الاصيل •

خط مستقيم لا غير ••

خط سريع الحركة ، يندفع من نقطة البدء الى نقطة الانتهاء ، كتيار النور ، شديد التألق ، يبلغ الهدف كالقذيفة الصائبة !

اذا لمحت هذا الخط يرف في سماء الفكر ، اغناك عن خطوط كثيرة أخر ، تمتد حينا وتتعرج حينا ، وتلتف هنا وهناك ، يحسب الغافل ان في امتدادها والتوائها وتذاوبها سر عظمتها ، ولكنه في الحق لا يصيب منها غير اخفاق التجربة ، وضيعة الوقت ، وسوء المصير •

انه كلمة واحدة •••

لفظ غني ، يزخر بكبار المعاني ، فيه غناء عن مقال ومقال •••"

وفي القطعة الثانية (ص ٤١ ـ٤٢) ، يصف لنا الكاتب النزعة القضائية في شخصية احمد امين :

"وانت لو تصفحت مختلف الجوانب من شخصية "احمد امين" لطالعت عينك صورة قاض تتوضح فيه نزعة القضاء بأوفى ما فيها من خلال الدقة والوزن والنظام ، واكرم ما فيها من خصال النزاهة والعدالة ويقظة الضمير .

انه قاض في خاصة شانه مع نفسه ، قاض في حديث مجلسه ، قاض في الجامعة استاذا ، وعلى مكتبه رئيس عمل ، قاض في معاملاته مع الناس بين قريب وبعيد ، قاض فيما يجري به قلمه من مباحث ودراسات وخوطر ...

وقد عرفت الاقدار نزعته القضائية في بواكيرها ، حين شب شبابه ، فارادت له ان يكون احد قضاة الشرع ، يفصل فيما هنالك من خصومة ونزاع ... ولكنه لم يمكث في منصب القضاء طويلا ، فترك ذلك الميدان المحدود ، ليكون قاضيا طليقا لا تقف به قيود المهنة عند غاية ، ولبث في دنياه ، على اختلاف مناصبه ، وتنوع مجالات نشاطه ، تملكه نزعة القضاء ، وتهيمن على فكره ما وسعها ان تهيمن .

وهذه النزعة القضائية قد وسمت حياة الرجل في مناحيها العقلية والاجتماعية بسمة الاعتدال ... فهو معتدل ابدا في علاقاته ووشائجه ، لا يجمح في القسوة ، ولا يتراخى في اللين . يحب حين يحب هونا ما ، ويبغض اذا ابغض هونا ما . اناى ما يكون عن التعصب والتحزب ، آنف ما يكون للسرف والتطرف ، اميل ما يكون الى الموادعة والحسنى !

والعجب العاجب في شخصية "احمد امين" ان نشأته قد اكتنفها كل دواعي التحفظ ، من معتقدات راسخة ،

وتقاليد صارمة ، وتعاليم جامدة ... ولكن فكره توهج والتمع وسط ذلك كله ، كما يتلألأ الجوهر النقي ، وخرج يلتمس الطلاقة في الافق الرحيب ... فاذا التمسنا الان حرية الفكر بين القادة الاعلام ، الفيناه منار الطريق ."

وقبل الانتقال الى القسم الثاني من هذا المقال ، اود ان اكرر مرة اخرى بأن الفصل بين هذه الاساليب واصحابها بشكل دقيق غير متيسر ، خاصة عندما نجد ان بعض الكتّاب الناثرين في ايامنا هذه يستعملون مزيجا من اسلوبين او اكثر . فمحمود تيمور مثلا يستخدم الاسلوب المُتَكَلَّف احيانا والاسلوب الوسط احيانا اخرى . ونجيب محفوظ وتوفيق الحكيم وحليم بركات يستعملون الاسلوب الوسط النقي احيانا مطعما بالاسلوب السهل الحديث . واستعمال الكتاب لهذه الاساليب الثلاثة يختلف باختلاف الادباء انفسهم ومقتضيات الاحوال ونوعية الموضوعات التي يطرقونها في كتاباتهم .

والان ، بعد هذا الاستعراض الشامل للاساليب الادبية النثرية المعاصرة ، انتقل الى الحديث عن مدى تأثير هذه الاساليب على النثر العربي المعاصر من ناحية الشكل والمضمون . وسأبدأ بالتطورات الشكلية . وهذه التطورات على انواع :

١. التطورات المتعلقه بالمفردات المستعمله ، وتشمل هذه التطورات ما يلي :

أ ـ المفردات العربية الغير مألوفة ، كالمفردات التي يستعملها محمود تيمور في كتابه "الشخصيات العشرون" . وهي مفردات عربية فصحى تضم بعض الاسماء والصفات والافعال النادرة الاستعمال ، مع انها موجودة في طوايا القواميس ، مثل : اسانيد ،

كوائن ، تحايا ، طرّاق ، افاكيه ، حوائط ، رحائب، لقاءة ، نشطة ، مظنة ، مشخص ، حالٍ ، جاحم ،متطامن ، عاجب ، اذكَر ، تعاصى ، اعتصر ، يمتح وغيرها .

ب ـ المفردات العربية العامية التي يغلب وجودها في الكتابات النثرية التي تستعمل الاسلوب البسيط ، خاصة في مواقف الحوار والمناقشة بين شخصيات القصة او الرواية التمثيلية . وقد اصبح استعمال العامية الان امرا طبيعيا عند بعض الادباء الناثرين المعاصرين ، امثال : احسان عبدالقدوس ، توفيق الحكيم ، يوسف السباعي ، وغيرهم. اذ توجد هناك امثلة كثيرة من المفردات والتعابير العامية في كتاباتهم القصصية او المسرحية ، كالامثلة التي وردت في القطعتين المختارتين ليوسف السباعي واحسان عبدالقدوس اثناء الكلام عن الاسلوب السهل الحديث. (١)

جـ ـ المفردات الاجنبية التي اصبحت بعد تعريبها واستعمالها اكثر الفة وشيوعا من نظائرها بالعربية . وتضم هذه المفردات اسماء الالات والاجهزة الحديثة الظهور ، وكذلك بعض المفردات والاصطلاحات العلمية . ويتوقف استعمال هذه المفردات على نوع الاسلوب وثقافة الاديب . فاصحاب الاسلوب السهل مثلا يستعملونها بكثرة حتى ولو كانت نظائرها في العربية شائعة . كما يستعمل اصحاب الاسلوب الوسط منها ما كانت نظائره

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(١) انظر ص ٣ ـ ٥ من هذا المقال .

في العربية لا تعطي المعنى الدقيق • اما الاسلوب المتكلف فاستعماله لها نادرا • والقطعة التالية من كتاب "العائد" للاديب خليل تقي الدين (ص ٨٢ ، ١٩٦٨) تعطينا فكرة واضحة عن استعمال المفردات الاجنبية بعد تعريبها في القصة العربية الحديثة•

"كانت عينا سلمان تلتهمان الحديد التهاما ، وتنظران الى زنود العمال وقد لطخها الزيت نظرات حب وحنان • فلفت فضوله صاحب الكاراج فسأله ما شأنه • وقال اني اطلب عملا •

— وهل لديك خبرة بالسيارات ؟

— كلا • لكنني ميكانيكي •

— واين تعلمت الميكانيك ؟

قال سلمان وقد رفت عيناه رفيفا سريعا متصلا :

— في بعقلين • كان عندى مطحنة وموتور ••• ولم تمض فترة وجيزة على وجود سلمان في الكاراج حتى تفوق على جميع رفاقه ، وتعلم سوق السيارات بسرعة مدهشة • ووثق رئيسه به فكان يختصه دون سواه بالعناية بسيارات الذوات ، وابناء الذوات •"

٢• التطورات المتعلقه بالعبارات والجمل العربية المتاثرة باللغات الاجنبية من ناحية اشتقاق واستعمال بعض مفرداتها ودلالاتها اللفظية • ويميل الى استعمال مثل هذه العبارات والجمل بعض الكتاب الذين تثقفوا او عاشوا في الغرب ، من امثال: حليم بركات ، جبرا ابراهيم جبرا ، ليلى بعلبكي • ومن امثلة هذا النوع ما يلي :

'He took the plane' اخذ الطائرة

'Programmed learning' التعليم المبرمج

'The scientific field'	الحقـل العلمـي
'The starry night'	الليـل المكـوكب
'A starry sky'	سـماء مكوكبـة
'to mould man'	لقولبـة الانسـان
'delectable trances'	غيبـوبـات جمـاليـة

٠٣ التطورات اللغويـة المتعلقـة ببعض التـراكيب النحويـة ، خـاصـة استـعمال ومعنـى بعض الادوات الموجـودة فـي هـذه التـراكيب ٠ فلقـد لاحظت مثلا ان العربيـة المعـاصـرة تسـتعمل بعض التركيبـات المشـتملة علـى ادوات النفـي التـي اصـابهـا بعض التغيير بخصوص المعنـى والاسـتعمال ٠ فقـد اكتسـبت بعض الادوات معاني جديدة ، وتوسـعت معانـي البعض الاخـر ، كمـا ان بعضهـا قـد قـل اسـتعمـاله لدرجـة واضحة ٠ فالتراكيب المشـتملة علـى اداة النفـي "لمـا" التـي تدل علـى نفـي الحدث فـي الزمن المـاضي المتصل بالزمن الحـاضر اصبحت الان قليلـة جـدا ، حتى اننـي لـم اجـد الا ثمـانيـة امثلـه منهـا فـي ٢٥ كتـابـا تفحصتهـا ٠ ومـن الجديـر بالذكـر ان هـذه الامثلـة ظهـرت فـي كتـابـات طـه حسـين وميخـائيـل نعيمـة ومحمود تيمور ومهدى المخزومي ، وجميعهم مـن الكتـاب الذين ظهـروا ونضجوا قبل الحرب العـالمية الثـانيـة ٠

ومـن جهـة احـرى ، اكتسـبت "لـم" التـي تعمل لنفي الحدث فـي الزمن المـاضي معنـى جديدا للنفـي ، وهـو المعنـى الذى كانت تدل عليـه "لمـا" ٠ اذ اننـي وجدت كثيـرا من الامثلـة المشـتملة علـى ادات النفـي "لـم" الدالـة علـى نفـي الحدث فـي الزمـن المـاضي المتصل بالزمن الحـالي ، كالامثلـة التـاليـة :

"لـم ياتوا بعـد ، حتى الان لـم تفهمني ، لـم تبلغ بعـد العشـرين ، ولـم يبق الـى يومنـا هـذا سـوى الدرام والكوميديـا" ٠

كذلك ، فان اسـتعمال التراكيب المحتويـة علـى "هـل" التـي تدل

على الاستفهام الانكارى مع وجود نغمة النفي في الجملة اصبح قليلا جدا . فلقد وجدت خمسة امثلة فقط من هذا النوع في الكتب التي قراتها .

اما فيما يختص باداتي النفي "لات ، إن" فقد اصبح استعمالهما غير طبيعي او معدوما في الوقت الحاضر .

وما اصاب باب النفي من تطور ، اصاب الابواب الاخرى من النحو . فلقد لاحظت ان التراكيب النحوية التي تتصدرها الحال مثل "مسرعة الطائرة مسافرة" او تلك التي تفيد الحال فيها التشبيه افادة تبعية مثل "هجم القط اسدا" ، الى غير ذلك من التراكيب التي يكون معنى الحال فيها موءكدا مضمون الجملة التي قبلها "خليل ابوك رحيما" ،قد اصبحت جميعها نادرة الوجود .(٢) اذ انني لم اعثر على مثيل لها بعد . كما ان التراكيب اللغوية التي يكون الحال فيها مصدرا لتعقيد المعنى والدلالة عليه بطريقة غير مباشرة قلت لدرجة كبيرة ، حتى انها اصبحت مقتصرة اليوم على الاسلوب المتكلف النادر . والمثالان التاليان من كتاب "الشخصيات العشرون" لمحمود تيمور (ص ٢٣) خير تفسير لذلك :

"لمحته على متكأ يجلس جلسة تتوضح فيها الوداعة واللباقة ، متراخي الاوصال ، قليلا على المتكأ شخصه الضئيل" .

وكذلك قوله في وصف احمد امين (ص ٤١) :

"انه قاض في خاصة شانه مع نفسه ، قاض في حديث مجلسه ، قاض في الجامعة استاذا ، وعلى مكتبه رئيس عمل ..." .

ليس المقصود مما اشرت اليه من تطورات هنا التعميم ، وانما ايضاح حقيقة واقعية تتعلق بالتطورات التي تمر فيها قواعد اللغة

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(٢) الامثلة الواردة هنا ماخوذة من كتاب "النحو الوافي" لعباس حسن (الجزء الثاني ، الطبعة الثالثة ، ص ٣٣٨ ـ ٣٨٥ ، ١٩٦٨) .

العربيـة المعـاصرة • وسننشـر بالتفصيل جميع التطورات اللغويـة التـي اصـابت ابواب النحو المتعددة فـي مقـالات خـاصة بعد حصولنـا على المعلومـات الكافيـة ، وتحليلهـا تحليلا علميـا دقيقـا ، معتمدين علـى امثلـة حية مسـتمدة مـن الكتب الادبيـة الموجودة بين ايدينـا الان •

٤• التطورات المتعلقـة بصيـاغة الجمل العربيـة وتركيب كلمـاتهـا واسـتعمال التنقيط علـى نموذج التيـارات الحديثـة فـي الكتـابة • فكثيـرا مـا نجد اليـوم بعض القصص والروايـات التمثيليـة العربيـة التـي لا يراعي اصحـابهـا عند كتابتهـا اصول الضبط القديمة فـي التنقيط او طول الجمـل وتركيب اجزائهـا •

ان مجرد نظرة لكتـابات احسـان عبدالقدوس، ليلـى بعلبكـي ، حليـم بركـات ، عبدالله القويرى ، محمود تيمور ، وبعض روايـات توفيق الحكيـم الحديثة ، لتعطينـا فكـرة واضحة عن اسـتعمال هوءلاء الكتاب وامثـالهـم جملا تتراوح فـي طولهـا بين كلمـة واحدة الـى سـطر او اكثـر • ومـمـا يسـترعي الانتبـاه هنـا مراعـاة هوءلاء الكتـاب اصول التنقيط الغربيـة الحديثـة ، مـن وضع للفواصـل والنقط وعلامات التعجب والاسـتفهـام الـى غيـر ذلك مـن الامور الدقيقـة التـي تسـير بموجبهـا الاسـاليب الكتـابيـة الحديثـة • وعلاوة علـى ذلك فاننـا نلاحظ ان بعض الكتـاب الحديثين لا يتقيدون ببعض المبـادىء الموضوعة التـي تنص مثلا علـى اعطـاء حق الاولويـة للفعل ، مـا لم يكن هنـاك تركيـز خـاص علـى الفـاعـل فـي الجملـة • فالفعـل والفـاعل عنـد حليـم بركات سـواء فـي التقديـم والتـأخير • والقطعة التـاليـة مـن كتـابه "عودة الطـائر الـى البحـر" (ص ٤٣ ، ١٩٦٩) توضح لنـا مـا سـبق ذكره من تطورات :

"طـه كنعـان كـان لا يـزال فـي دار البلديـة يحـاول تنظيم المقـاومـة الشـعبيـة • يوءلف فريقـا من المتطوعيـن للدفـاع عـن القدس • يتصل بالتلفون طـالبـا السـلاح • لا يتمكـن من الاتصال باحـد • موظفـو التلفـون تركـوا • هربـوا • يكـره شـعبه •

يحاول ان يتصل باخيه عصام في القدس• مستحيل • يتصل بعائلته • لا جواب • يفكر في انهم تركوا المنزل والتجاوا الى الحقول • لا باس• لا يخاف عليهم • زوجته تعرف كيف تدبر الامور • يثق بابنته عدلا • يخطر بباله ابنه درويش• انه الوحيد بين ابنتين • يخاف عليه • يتشاغل • قنبلة تسقط قرب دار البلدية • الزجاج يجرح وجهه •

يتناول خالد عبدالحليم بندقيته في سبسطيه • يريد ان يلتحق بالمقاومة الشعبية • تعترضه امه الحاجة سليمة • لا يجيبها • يحدق اليها بغضب • يزداد غضبه عندما تذكره انه الوحيد الذي يمكن الاعتماد عليه في العائلة • يزيحها من طريقه دون ان يقول شيئا • تتمسك به • تصرخ : لمن تترك زوجتك وبنتك واختك خيرية وابنها واولاد اختك ..؟"

ان الدارس لمثل هذه التطورات التي حدثت في الاساليب الادبية النثرية وما سببته من تطورات لغوية في الشكل والمضمون ، ليجد انها جميعها طبيعية في مسلكها ، دعت اليها ظروفنا المعيشية ، ومتطلبات حياتنا المعاصرة • فالمحيط الذى نعيش فيه بما فيه من مؤثرات اجتماعية وثقافية وسياسية ، هو الذى يملي علينا ما نكتب • ونتيجة لذلك فأنه مهما يكن اليوم من احتلاف في الاساليب المستعملة ، فانها جميعها تتلاءم مع محيطنا ولغتنا وواقعنا • وفي الحقيقة ، ان جميع هذه الاختلافات في الاساليب والتطورات اللغوية التي حدثت نتيجة لها ، لتدل دلالة واضحة على مرونة اللغة العربية المعاصرة وطواعيتها بشكل يجعلها قادرة على التعبير عن كثير من الافكار والمعاني بدقة وعمق ، وبدون عسر او مشقة •

ان التنوع في الاساليب الادبية النثرية المعاصرة كما شاهدنا ، قائم على اساس استعمال اللغة للتعبير عن مختلف المستويات الاجتماعية والثقافية • وما دام ادباؤنا المعاصرون يراعون الاسس

الادبية الحديثة في معالجة مواضيعهم ، وتصوير الحياة الاجتماعية والادبية كما يرونها باعينهم ، ويسعون جميعا اما لخدمة الجماهير التي يخاطبونها او لخدمة الثقافة العربية والفن الذى يمثلونه ، فليس من الضرورى اذن ان يكتبوا جميعا باسلوب واحد ومن اجل هدف واحد • اذ لو فعلوا ذلك لاتسم ادبنا بالضعف وضيق المجال، بدلا من القوة والاتساع •

هذا فيما يختص بالاساليب الادبية النثرية • اما فيما يتعلق بالموءثرات التي ادخلتها التيارات الادبية الحديثة على النثر العربي من معالجة جديدة للمواضيع ، واستعمال التنقيط وصياغة الجمل ، الى غير ذلك من استخدام المفردات والمصطلحات الاجنبية بعد تعريبها ، او اشتقاق كلمات عربية جديدة على شاكلة اخواتها في اللغات الاجنبية ، فهذا ما لا يعيب لغتنا العربية المعاصرة او كتابها الناشرين • فالايمان بالتجديد والتحرر ، والملاءمة بين كتاباتنا وحياتنا المعاصرة وما يوءثر فيها من تيارات حديثة في الكتابة والتعليم ، كلها اشياء ضرورية اليوم • ففيها فائدة لنا ، وتنويرا لاذهاننا ، وغذاء لادبنا ، وقوة للغتنا •

ان المجمع العلمي القاهري يحاول جاهدا الان ايجاد نظائر عربية للمفردات والمصطلحات الاجنبية • فاذا جاءت هذه النظائر العربية في وقت مبكر استحسنها الكتاب واستعملوها ، وبطبيعة الحال يستسيغها القراء ويقبلونها • اما اذا كان مجيئها في وقت متاخر ، او انها لا تعطي المعنى الدقيق الذى تعطيه المفردات الاجنبية، خاصة فيما يتعلق باسماء الالات والاجهزة العلمية ، والمكتشفات الطبية والفنية ، فاستعمال المفردات الاجنبية نفسها بعد تعريبها يصبح مالوفا اكثر ، لما فيه من دلالات وافية وواضحة للالفاظ المستعملة •

كذلك ، فان استعمال اللغة العامية في بعض القصص والمسرحيات الحديثه لتصوير الحوادث والاشخاص تصويرا واقعيا اكثر منه خياليا ،لمكسب طبيعي جديد يجعل ادبنا ينطق بالحياة الحقيقية • وسواء كانت هذه الظاهرة مستقاة من الاداب الاجنبية او نتيجة لحركة التطور الطبيعي التي يمر فيها الادب العربي والاداب العالمية جميعا ، فانها ولا شك ظاهرة سليمة ، قويمة في مسلكها وهدفها • وقد لا ينجم منها خطر ما دام استعمالها مقصورا على مواقف النقاش او الحوار لاغراض ادبية محضة •

ان الخوف الذى وقع فيه بعض الكتاب والنقاد في الاونة الاخيرة من ان استعمال الاساليب السهلة التي تستخدم العامية وبعض المفردات الاجنبية ، هو فساد للغة العربية وهدم لقواعدها النحوية ، لخوف مبني على الوهم لا الواقع • فاهتمام اصحاب الاسلوب السهل بالمضمون ومراعاتهم للطبقات الشعبية التي يكتبون لها ، ليس فيه قضاء على اللغة العربية وقواعدها ، وانما تبسيطها وجعلها مناسبة للمستوى الثقافي والذهني لهذه الفئات • اذ ان كل ما يحصل في هذه الحالة هو عدم استعمال التراكيب اللغوية التي لا تعبر عن افكارنا تعبيرا واضحا وبطريقة مباشرة • وما شاهدناه من تطور في استعمال بعض تراكيب النفي والحال في الكتابات النثرية المعاصرة لخير برهان على ذلك • فعدم ميل الكتاب الذين يستعملون الاسلوب السهل الى استعمال ادوات النفي التي تدل على النفي بطريقة غير مباشرة ، كمدلول النفي المستفاد من النغمة عند استعمال "هل" ، او الاحاطة بمعنى الجملة الكلي مع اعتبار ما قبلها وما بعدها عند استعمال "لات ، ان" ، او احلال اداة النفي "لم" محل "لما" للدلالة على نفي الحدث في الزمن الماضي المتصل بالزمن الحاضر – لما في ذلك من وضوح وزيادة بيان – كل ذلك لم ولن يضر باللغة العربية او يخل بقواعدها النحوية • ونفس الشيء يقال عن تجنب اصحاب

الاسلوبين السهل والوسط من استعمال الحال في صدر الجملة او استعمالها مشبهة بالصفة ، الى غير ذلك من المواقف البلاغية التي ينصب اهتمام الكتاب فيها على الشكل والزخرف بدلا من نقل المعنى بصورة واضحة وسهلة .

مجمل القول ان النثر العربي بعد الحرب العالمية الثانية يمر في دور الاستقرار التام . فمن ابرز ما نلاحظه في الشواهد الواردة في القسم الاول من هذا المقال تطور الاساليب والموضوعات النثرية تطورا يساير روح العصر الحديث . ومع ان هذه التطورات قد بدأت بالظهور ابان الحرب العالمية الاولى ونمت قبيل الحرب العالمية الثانية ، الا انها نضجت واستقرت في السنوات التي تلت الحرب الاخيرة . فبعد ان كنا نجد التشاحن والبغض والمعارضة تسود بين مجموعات الكتاب فيما قبل الحرب العالمية الثانية ، نرى ان كل ذلك قد انعكس الى تضامن وتفاهم وتقارب فيما بعدها . وبعد ان كنا نجد بعض الكتاب فيما مضى متمسكين بالتقليد والمحافظة وغيرهم متحمسين للتجديد والابتكار ، نرى معظم الكتاب اليوم يستقون من المبادىء الكتابية العصرية ، حتى اولئك الذين لا يزالون يحنّون الى استعمال الاسلوب التقليدى القديم . وبذلك تسنى للنثر العربي اليوم الاتصال المباشر بحياة الناس وما يؤثر فيها من عوامل نفسية واجتماعية وسياسية . فظهرت فيه روح البحث والتحليل واتجه اكثر فاكثر الى العناية بالمضمون والشكل معا . وقد اصبح التقارب واضحا اليوم بين طبقات الكتاب حتى اننا نجد البعض منهم يستعمل اساليب متنوعة لا اسلوبا واحدا ، حسب ما تقتضيه الظروف ومناسبات القول . ونتيجة لذلك اصبح من الصعب ، كما اسلفت ، التمييز بين طبقة واخرى الا عن طريق الشمول فقط .

ولقد راينا كيف ان هذا التنوع في الاساليب الكتابية العصرية ضرورى لادبنا العربي وشعبنا العربي ، لانه يفتح الميدان لجميع الطبقات

الشعبية على اختلاف انواعها وتفاوت ثقافاتها ومفاهيمها كي تنهل منه كما تشاء . اذ انه ليس من العدل في عصر مثل عصرنا هذا ان نقصر ميدان الكتابة النثرية على اسلوب دون آخر ، او على فريق من الكتاب دون الفريق الاخر ؛ خاصة وان منطق الحياة المعاصرة وطبيعة الناس فيها يتطلبان الوانا متنوعة من الادب لا لونا واحدا .

وما الشواهد التي اعطيتها اثناء الحديث عن النفي والحال الا امثلة قليلة من التطورات الواقعية التي اصابت نثرنا العربي المعاصر في متعدد نواحيه وابوابه . وتؤكد لنا هذه التطورات وامثالها وعي كتابنا المعاصرين الى ضرورة وجود نوع من المطابقة بين الاسلوب واللغة التي يستعملها الكاتب من جهة ، وبين الكاتب واسلوبه ومناسبات القول من جهة اخرى . ووجود هذه المطابقة في الاساليب النثرية العصرية له اهميته الكبيرة ؛ اذ انه يفسر لنا بوضوح جميع التطورات التي تحدث ، كاستعمال او عدم استعمال بعض الادوات والتراكيب اللغوية حسب ما تتطلبه الاساليب والمناسبات معا .

وثمة كلمة اخيرة اود ان اختم بها هذا المقال ، وهي انه اذا كان هدفنا ابقاء نثرنا العربي الحديث حيا ، مجاريا لحياتنا العصرية ، ومتجاوبا مع فريقي الكتاب والقراء معا ، فما علينا الا ان نتقبل بارتياح التطورات الحديثة التي اصابت نثرنا المعاصر واضفت عليه مرونة في التعبير والتصوير ، وسهولة في الوصف والفهم . اذ ان قوة اللغة على التعبير والتصوير ، وقدرتها على الوصف والبيان ، تأتيان من طريقة تركيب الجمل وترتيب عناصرها ، ومطابقة الاسلوب المستعمل لمقتضى الحال ، وعدم خروجها عن الاصول العامة المتبعة في كتابة النثر العربي . وفي الوقت الذى نجد فيه اى عمل ادبي نثري ضعيف الانشاء والتركيب بحيث لا يوجد ارتباط قوى بين اجزاء عناصره ، فما علينا الا ان ننبذه ونحاربه سواء اكان اسلوبه بسيطا أم بليغا .

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THE CENTER FOR RESEARCH ON LANGUAGE AND LANGUAGE BEHAVIOR:

A SURVEY OF RESEARCH[1]

1965 - 1970

Beth Greene

The Center for Research on Language and Language Behavior (CRLLB) was founded on February 1, 1965 and has continued in operation for six years. As its initial objectives CRLLB proposed:

(1) Basic research on language learning with people of all ages and levels of language functioning;

(2) Activities leading to the preparation of techniques and materials to improve language learning;

(3) Applied research involving the iterative modification and field testing of instructional techniques, materials and devices; and

(4) Dissemination of information leading to the enhancement of research, development, and instruction in language learning.

Study of both formal and thematic repertoires in language functioning were to be conducted. Within the formal area of research such topics as discrimination of auditory and visual stimuli, differentiation of vocal and manual responses, and the integration of these repertoires were to be examined. Thematic explorations were to include analysis and specification of the verbal and non-verbal cues which serve to identify categories of utterances, the production of semantically and grammatically appropriate utterances, and the synthesis of these repertoires into the structure of normal language. Preparation of diagnostic and evaluative instruments, the development of standardized techniques and programmed audio-visual materials to aid in learning language skills were to be developed for the analysis and conduct of language learning.

To accomplish these selected research topics as well as other areas of concern, investigations focussed on speech perception and production, language functioning in normal and atypical populations, cross-linguistic variables in language usage, the development of mechanical devices to augment foreign and English as a second language learning, and the development of instructional materials and the field testing and dissemination of those materials.

Research and development activities have been directed fundamentally toward answering four kinds of questions about language: how does it operate (language processes); how does it come about (language acquisition); how can it be altered (language modification); what are its formal properties (language structure)?

Language Research Library

As an aid to CRLLB personnel a Language Research Library was established. Planned as a reference library for linguistics and the psychology of language, it contains a good selectionof basic reference and research materials. Approximately 1000 hard and soft bound books are available, the majority acquired between January 1966 and December 1967. Among this number are some important foreign and domestic research reports. An extensive collection of scholarly journals, numbering some 500, are currently received, many consecutively since 1966. These journals are utilized by both members of the Center and Language and Language Behavior Abstracts which shares the facilities. Included in the library are tapes (350), microfilms (315), and microfiches (500 DDC documents), as well as copies of all CRLLB publications. Library resources are available to people who are not connected with CRLLB; that is, University of Michigan faculty and students and visiting scholars at CRLLB and the University.

Dissemination Activities

Dissemination activities have been a continuing major concern. Semi-annual reports have included interim and final reports of ongoing research activity spanning dozens of areas of investigation. During the past six years over 1500 requests for CRLLB publiations were received and reprints and reports supplied to domestic and foreign individuals and institutions. Most CRLLB publications will continue to be available through University Microfilms, ERIC, and the University's Sponsored Research Editorial Office.

A significant Conference on Language and Language Behavior held in October 1966 included participation by Center members and invited scholars from other institutions. Attended by some 750 persons, the conference provided a forum for the interchange of ideas in all areas of language behavior (Zale, 1968).

Language and Language Behavior Abstracts

Founded by CRLLB in 1967, Language and Language Behavior Abstracts (LLBA) is a quarterly journal of studies published by The University of Michigan. It contains summaries of articles on the nature and use of language which were originally published in 25 different languages. More than 900 scientific journals, research reports, occasional papers, and periodic reviews from over 40 countries are regularly screened for relevant articles. Although much of this literature is relatively well known and of excellent repute in its country of origin, a large portion

is not widely disseminated and thus is not easily identified as a resource by potential users.

The function of LLBA is the identification and acquisition of this literature, the selecting and abstracting of articles dealing with language and language behavior, and the dissemination of these summaries to interested scholars and researchers throughout the world's scientific community. As a comprehensive journal LLBA deals with articles from about 30 disciplines including in its broad scope psycholinguistics, sociolinguistics and applied linguistics including second language learning, speech and hearing pathology and physiology, anthropology, educational and medical specialties.

LLBA has concentrated on overcoming rigid discipline orientation and limits of language and geography by the use of an interdisciplinary and international approach. By providing a central source of all research related to language and language behavior, methods and findings of one discipline are made available to researchers in other areas concerned with related problems. LLBA's international approach is an attempt to overcome communication barriers arising from geographical dispersion and language diversity by centralizing the literature.

Programmed Instruction as a Method of Teaching Languages

One of the goals of programmed instruction is to allow the student to work at his own pace and in so doing permit him to master a particular skill before advancing to other skills (Geis, 1966; Smith, 1966). Members of CRLLB investigated the role of the printed answer in programmed instruction (Geis, Jacobs & Spenser, 1965). It is generally accepted that the immediate feedback available in programmed instruction reinforces the learner.

This series of studies revealed that there is a trimodal distribution of answer observing in programmed materials. A few students look at every answer, a few look at no answers, and most students look at some of the answers. Furthermore the probability of a student observing an answer after having made an error was higher than after having made a correct response. Thus, observing answers when the student knows or suspects that he has made an error complicates the role of the answer as a reinforcer. He may be reinforcing his incorrect responding behavior (Geis & Nielsen, 1967).

A more positive view suggests that when subjects are uncertain as to the correctness of their answer, exposing the answer makes possible a correction on their part and increases the likelihood that they will emit a correct answer on the next occasion that such an answer is called for. This view is consistent with the guiding principles of programmed instruction. The high degree of redundancy in programmed instruction permits the student to correct himself and consequently learn the correct response.

It should be noted that no correlation was found between confirming behavior and performance. This finding suggests that students have unique personal response styles. In addition the particular mode of presentation of the correct answer (tab-pull, flip card, or successive frame) produced different amounts of answer observing but no differences in performance on post test measures of content.

To encourage and facilitate the use of programmed instruction and self-instructional techniques, a bibliography was prepared at the earliest possible date (Knapp, 1966). In addition, articles containing background information on programmed instruction and specific suggestions for applying the principles of programmed instruction to language courses were included (Brethower, 1966; Smith, 1966).

Second Language Learning

Arabic

Second language learning has been a major concern of CRLLB. One language area that was examined extensively was Arabic. When these investigations were begun, no satisfactory contrastive studies had been done on the phonology and prosody of American English and Arabic dialects, especially from a pedagogical viewpoint. Therefore, this area of study was of interest to both language teachers and linguists. Undertaken in 966 by Rammuny, a contrastive analysis of the prosodies of General American English (GAE) and Colloquial Jordanian Arabic (CJA) identified areas of difficulty that native Arabic speakers had when learning English as a second language (Rammuny, 1966a, b). Problems of stress, rhythm, and intonation complicated the learning of English. Through carefully reinforced training, the native Arabic speaker was able to approximate the correct English prosodic patterns (stress, rhythm, intonation) which are quite different from those of Arabic. A distinctive part of this research was the use of the Speech-Auto-Instructional Device (SAID) developed at the Behavior Analysis Laboratory of The University of Michigan (Buiten & Lane, 1965). The SAID system, a computer controlled analyzer, provided immediate feedback to the student as he attempted to reproduce GAE prosodic patterns. Although SAID was time-consuming, expensive, and very demanding for the student, this technique enabled students to acquire more natural sounding GAE patterns.

A programmed course in Modern Literary Arabic (MLA) phonology and script has been developed at CRLLB by McCarus and Rammuny. In 1967 research involving a word count of 11 MLA textbooks used in the United States was started (McCarus & Rammuny, 1968). The main objective of this research was to provide a practical vocabulary base for a fully-programmed course in Arabic phonology and script (McCarus & Rammuny, 1967). This was followed by a study involving a contrastive analysis

of American English (AE) and Modern Literary Arabic (MLA) and an analysis of the MLA writing system (McCarus & Rammuny, 1967). From this study, and the computerized word count of 11 MLA textbooks, three sets of instructional materials dealing with pronunciation, reading, and writing were drafted in 1967. These semi-programmed materials, entitled "Phonology and Script of Modern Literary Arabic" intended to teach Arabic phonology and script combined to native speakers of English (McCarus & Rammuny, 1968). The materials contain exercises especially constructed to train the student to make subtle discriminations in Arabic pronunciation and to interpret equally subtle written variations in Arabic script. Field tested at The University of Michigan, as well as at several other major educational institutions, the materials were reworked, retested, and in order to make them as widely usable as possible, the materials appeared in a fully programmed course entitled "A Programmed Course in Modern Literary Arabic Phonology and Script" in 1969 (McCarus & Rammuny, 1969).

Subsequently revised in 1970, these materials became the first of their type to teach Arabic phonology and script combined together in a programmed course. Such a course was badly needed in view of the increased use of modern audio-lingual techniques in the teaching of Arabic in this country. Included with the texts are coordinated tapes to provide an integrated approach to learning Arabic.

Interference Variables in Language Learning

In learning a second language there are many interfering variables as well as variables that facilitate learning. Most research is concerned with the facilitating factors. However, at CRLLB several variables which led to interference in second language learning were examined.

In one such experiments subjects were chosen who varied in their experience with French (no experience in any Romance language, second semester college French, native French speakers) to explore the relationship between foreign language experience and color word interference (Sisson, 1968). The task required subjects to state aloud the color of the ink used to print a series of color words on a white card. Interference occurred because the color of the ink and the color name were always incongruent. Previous research consistently revealed that performance time was fastest when subjects read a series of color words printed in black ink (W), somewhat slower when subjects named patches of color (C), and appreciably slower when they had to name the color of the ink used to print the color name (CW). This last case requires that the color of the ink and the color name must both vary and always be incongruent.

In this study the W condition consisted of four English color words printed in random series in black ink, the C condition presented an equal number of circles of the four colors, and the CW (interference) condition presented the four color words in French printed in incongruent ink colors which the subject had to name by English color name. The

results indicated that when the color names were in French and the subject was required to name the ink colors in English, greater familiarity French was associated with greater interference in color naming.

Another study explored the intervening steps of bilingual speakers in a word association task which questioned facilitation and interference in bilingual performance--the degree of thinking in the foreign language (Riegel, 1970).

Ritchie (1968) considered interference as a basic problem of second language learning. He demonstrated the qualitative differences involved when speakers of different native languages learn English. The suggestion was made that training procedures in teaching phonology might be varied with respect to the native language of the learner to capitalize on phonological similarities. Systematic categorization of interfering behavior might reduce the influence of deeply entrenched native language phonology in second language learning.

Recent Research in Second Language Learning

Recent Center research has focused primarily on the acquisition of second language skills, the development of instructional materials for teaching those skills, and ways to improve classroom instruction in a second language.

Hebrew

The development of instructional materials for the teaching of Modern Hebrew has resulted in a set of 15 units (Coffin, Schramm, & Paper, 1970). These units are noteworthy in that they deal with topics that are of popular interest in archeology, geography and history of Israel, and history of Jewish communities in the United States. All the units are based on non-fiction sources and as such reflect an increased concern with cultural affiliation toward the group which speaks the language one is learning. The completed set of units is subject to revision following field testing in the Modern Hebrew program at The University of Michigan.

Cantonese

A beginning Cantonese Chinese course for students acquainted with Mandarin Chinese is being produced (Dew, 1970). Initially the vocabulary introduced in this course will be correlated with the vocabulary introduced in beginning Mandarin courses. The vocabularies have been sifted for "cognate correspondence"; that is, a categorization has been made between 1) items that, when given the appropriate Cantonese reading, retain the same meaning they had in Mandarin, and 2) those items which cannot be directly transferred. Thus the course attempts to use the pre-existing knowledge of the student. To facilitate acquisition of

appropriate pronunciation, a set of Cantonese-Mandarin phonological correspondences has been compiled. The comparative description of Cantonese and Mandarin phonological systems will provide an extensive body of data on which pronunciation drills and annotations of items presented in the texts may be based.

Arabic

The Arabic group has as its current goal a comprehensive treatment of Modern Literary Arabic (MLA) syntax (McCarus, Rammuny, Abboud & Erwin, 1970). A corpus of one million words from a large number of texts will be stored on a computer to permit immediate retrieval of occurrences of any structure under study. On completion of the analysis and description of MLA syntax, it will be feasible to do a contrastive analysis of English and Arabic syntax, then to pinpoint those features of Arabic structure most difficult for English speakers to master, and then experiment on the most effective ways to teach them.

Phonological Rule Learning

Experimental studies have provided hard data on two aspects of second language learning in the areas of phonological rule learning and spoken language. Schane and Tranel (1970) have demonstrated the necessity of providing students with rules of phonology to aid them in mastering certain second language phonological variables. Experimental evidence on discovery learning by students of the natural rule in French phonology (for example, elision and liaison) demonstrated that when the natural rule was included in the learning of a nonsense language "Newspeak", students showed more rapid mastery of "rules" than when the natural rule was non-existent. Thus, in teaching phonology the presentation of the rule per se should facilitate pupil mastery of the specific constructions.

Training in Production and Discrimination

An investigation into the method of training of production and discrimination of exotic sounds compared two conventional teaching methods: auditory vs. articulatory (Catford & Pisoni, 1970). The results somewhat negate the use of programmed instruction in the pedagogy of foreign languages. Emphasis is placed on the need for a human instructor to describe articulatory postures required to produce specific sounds rather than an auditory model specifying listen-imitate-repeat as in a programmed technique.

Authentic Pronunciation in Second Language Learning

For the speaker of a second language to approximate the native speaker, his pronunciation seems to be more crucial than his knowledge of either semantics or syntax. In other words an authentic sounding

"accent" is more relevant than vocabulary or grammatical correctness. Much of the teaching of second languages has stressed vocabulary and grammar. Recent pedagogy has emphasized the conversational approach which includes increased attention to pronunciation.

A large body of research at CRLLB has been concerned with the acquisition of authentic pronunciation. Several studies reflect basic research on the nature of the sounds of the second language (both English as a second language and foreign languages including Arabic, Chinese, and French), pedagogical techniques, and mechanical aids for teaching the sound system.

Native-like fluency in a second language is predicated on a mastery of its patterns of intonation, stress, and rhythm--in short, a mastery of its prosody. To train learners in these areas of foreign languages, an electromechanical device was built. At CRLLB that device, the Speech Auto-Instructional Device (SAID) has been modified and employed in several research experiments.

Speech Auto-Instructional Device

SAID presents to the student tape-recorded pattern sentences that are considered to be standards in prosodic performance. These sentences are programmed in the best known sequence for teaching prosody in the target language to a speaker of a given native language. The student is instructed to imitate the pattern sentence after he hears it. Second, SAID processes the students imitation, and instantaneously evaluates its acceptability on the basis of its three distinct prosodic features: pitch, loudness, and tempo. Third, SAID immediately displays to the student the degree to which his imitation is unacceptable, and demonstrates how he must modify his next imitation, in the prosodic feature under consideration in order to make the imitation more acceptable. This process of presentation-evaluation-display repeats itself until the prosody of the student's imitation is acceptable (Buiten & Lane, 1965).

It is to the second step of this above procedure that continued research has been directed. An examination of the sources of parameter variability of vowels was conducted to ascertain the possibility of mechanical recognition (Hemdal, 1967). By limiting the computer analysis to formants one and two (F1 and F2), it was found that the vowels could be correctly classified. Formant location of 176 productions of eight vowels for nine different speakers were presented. It was shown that suitable accuracy of classification is obtained by a boundary of constant F1 and a boundary of constant F2. Although this study deals only with vowel production, it was suggested that it may be of significance in vowel perception.

Air flow Patterns of Speech Sounds

A quite different approach to mechanical recognition of speech was taken in a series of studies dealing with airflow out of the mouth in the

production of speech (Catford, Lane, Oster & Ross, 1966; Lane, Catford, Oster, O'Donnell & Rand, 1967; Catford, Josephson & Rand, 1968). Kymographic recording of total air flow out of the mouth has been used to diagnose the varying durations and degrees of constrictions of the vocal tract during speech. This project attempted to introduce a second dimension to recordings of air flow--cross-sectional area of flow--on the hypothesis that this would reflect changes in the location and cross-sectional shape of constrictions of the vocal tract. The findings were anticipated to be of value in perfecting automatic speech recognition devices and allied objectives.

The system developed for obtaining air flow patterns consisted of a matrix of 16 hot-wire anemometer flow sensors, a PDP-4 Digital computer, an X-Y oscilloscope, a circuit generating circles on the oscilloscope screen in spatial locations corresponding to the locations of the sensors and of sizes corresponding to the flow velocity at each location, and a control box enabling the operator to change the state of the computer

Upon completion of computer storage of air flow patterns for specific speech sounds, learners would attempt to match their productions of target language (English or foreign languages) patterns to representative patterns in computer storage.

Personality Variables in Second Language Learning--Empathy

The effects of personality variables upon second-language acquisition and performance are often cited by language teachers as critical. In a series of studies Guiora, et al. (Guiora, Lane & Bosworth, 1967; Guiora, 1967; Guiora, Taylor & Brandwin, 1968; Taylor, Catford, Guiora & Lane, 1969) have examined the role of empathy on ease of second language acquisition and accuracy in second language pronunciation. The major hypothesis investigated was that people who can be described as high empathizers may achieve a greater degree of pronunciation authenticity than those who are low empathizers.

In an exploratory study an extensive battery of tests was administered to a group of high school French teachers, including measures of personality, interest patterns, general aptitude and intelligence, and perceptual functioning. Subjects' spoken French was rated by a panel of native French speakers (Guiora, Lane & Bosworth, 1967). An instrument was constructed for the purpose of measuring empathic capacity. Briefly, that instrument consisted of strips of film of a person's face shown at reduced speeds (24 frames per sec. to 4 frames per sec.). At these speeds subjects can perceive changes in facial expression undiscernible at regular speeds. These transitory facial expressions were called micro-momentary expressions (MME's).

Results indicated that most of the psychological tests did not correlate significantly with scores on the measures of authenticity.

However, a significant rank order correlation (+.60) was found between the measures of empathic capacity and those of pronunciation authenticity.

Further studies replicated the significant finding noted above (Guiora, Taylor & Brandwin, 1968; Taylor, Catford, Guiora & Lane, 1969). Undergraduate students received instruction in the pronunciation of Japanese. Ten utterances were tape recorded for each subject; five were immediate imitations of the instructor and five were responses during dialogue. These utterances were rated for accuracy in pronunciation by two native Japanese linguists. Subjects were also given the MME test of empathy to provide a measure of empathic capacity. In addition they wrote responses to several cards of the Thematic Apperception Test (TAT) which were scored for empathy (sensitivity to feelings for characters in the stories).

The overall results of these studies tend to support the theory on which the investigation was based. Individuals who were more aware of feelings were more sensitive to the details and specific aspects of the second language and reflected this in speaking. To account for some negative findings, it was suggested that anxiety might affect MME responding and act as a distractor in second language pronunciation accuracy.

This possibility was explored in another study (Garwood, Guiora & Kalter, 1970). Several measures of anxiety were administered to subjects as well as the MME task. The results did not corroborate the suggested relationship between anxiety and MME responses. Currently a large scale replication of the original Michigan study is underway with the assistance and facilities of the Defense Language Institute.

Instructional Devices--Pluralingua

Language laboratories have become a significant aid in teaching second languages. The development at CRLLB of the Pluralingua (Companys, 1968) added a dimension to language laboratory procedures. Basically a self-contained language laboratory, the Pluralingua is a standard 4-track tape recorder modified by the addition of extra amplifiers, filters, voice-operated relays, and other relays to permit the responses of up to six students to be recorded during a single laboratory session on one spool of specially prepared magnetic tape. Different tracks of the tape are utilized to allow simultaneous involvement by all students while permitting a single instructor to monitor specific channels which contain only student responses.

The Pluralingua permits active student participation. Through the use of more than two channels, the model stimulus may be responded to more than one time without the time delay needed to rewind the tape which is the case in most tape recorded lessons. A study by Sisson (1970) indicated that students who were actively involved, as opposed to those who had to delay their comparisons to the model stimulus,

achieved superior results on tests designed to measure their progress in pronunciation and discrimination.

Classroom Dynamics--Verbal Interaction

Foreign Language Classes

Several studies were undertaken examining verbal interaction in foreign language classes for the purpose of improving teacher training. The earlier studies made video tape recordings and analyzed the temporal distribution of instructor's speaking time (Dugas, Knapp & Sisson, 1966; Knapp, Dugas & Geis, 1966). In spite of the differences in the constitution and conduct of various classes, several properties of their temporal distribution are relatively constant.

The amount of total speaking time was almost uniformly divided into 45% student speaking time and 55% teacher speaking time. Further, teachers' speaking time was relatively consistently divided into model time (20%), prompting, correcting and confirming time (10%), and other time (25%). A major discriminating feature was the amount of silent time, especially the wide variation in length of pauses in the students' responses before prompting and the length of time after a model has been presented but before a student was selected to respond (Dugas, Knapp & Sisson, 1966).

The same video tapes were analyzed to determine specific teaching problems related to teacher student interactions. The analysis led to recommendations for more effective and efficient classroom teaching concerning specification of student terminal behavior, diagnostic testing, strategies of teaching, contingency management, and language skills. Teachers, in this study University teaching fellows in French, viewed edited versions of these tapes as part of an in-service training program. Awareness of the behavior that occurred in the class, rather than consciousness of methods of instruction, was emphasized in this study (Knapp, Dugas & Geis, 1966). The teachers were able to talk objectively about classroom behaviors. In the absence of follow-up data on these teachers, the authors suggest that the teaching fellows were at least aware of the importance of specifying a set of terminal behaviors which would then act as a guide in their teaching.

A recent study sought to develop, test, and refine instruments directed specifically at describing verbal behavior in the language classroom (Capelle, Jarvella & Revelle, 1970). An observational system following the model developed by Flanders (1964) consisted of 10 macrocategories (7 to indicate teacher behavior, 2 for student behavior, and 1 for silence or confusion). However, Capelle refined thismodel by subdividing seven of the macrocategories to more adequately reflect foreign language teaching interaction and techniques. (For example, Category 8--Student responses--is broken into three parts: 8_1 indicating individual repetition, 8_2 choral repetition or answers, 8_3 individual

answers.) A second observation system was designed to reflect the teacher's command of the foreign language. It consisted of five major categories with appropriate linguistic subcategories to describe specific weaknesses or errors in spoken French.

Special Education Classes

Teacher-pupil interaction in classes for normals, educable mentally retarded (EMR) and trainable mentally retarded (TMR) were analyzed to determine the differences in patterns of interaction (Semmel, Herzog, Kreider & Charves, 1967). In the earlier study of normals and EMR's, differences in both the amount and nature of teacher and pupil talk in the two types of classrooms were found (Semmel, Herzog & Jorgenson, 1965). When the data for TMR classes is included, several trends may be noted. EMR teachers made greatest use of lectures and TMR the least, with teachers of normal children falling in between. Student response may be a function of intelligence in that normals respond the most, TMR the least. More student statements were initiated in EMR classrooms than either TMR or normal classes. TMR classes appear to have much more silence and/or confusion than regular or EMR classes.

Computer-Assisted Teacher Training System

The development of a Computer-Assisted Teacher Training System (CATTS) at CRLLB was motivated by earlier work on the analysis of teacher-pupil interaction in the classroom (Semmel, et al., 1968). An extensive demonstration-research project was designed to determine the effects of feedback on teacher trainees who were systematically observed and evaluated during 15 half-hour practicum teaching lessons. By utilizing a computer (PDP-4) and elaborate hard- and software components, a button press coding system was developed to replace the time-consuming coding, tallying, summarizing and analysis of in-person observation. Furthermore, the incorporation of real-time computer assistance provided the in-situ teacher with immediate visual feedback on his teaching behaviors. A cathode ray tube was placed near the teacher in the classroom and the scope displays indicated cumulative percentage curves for several interaction variables. The teacher was able to monitor his performance through CATTS and regulate his behavior to conform to specific behavioral objectives.

It was determined in a pilot project that a teacher could use continuous feedback within a classroom setting with minimal interference to his verbal teaching behavior (Semmel, et al., 1968). With very little introduction to CATTS, the teacher could decode the information presented on the scope display and decode the types of behavior represented by this form of abstraction.

Using CRLLB facilities, three dissertations employed CATTS with teachers of mentally retarded children (Kreider, 1969; Schmitt, 1969; Weaver, 1969). These studies were concerned with modifying teachers'

questioning behavior, increasing teacher use of pupil ideas, and teacher expectancies regarding teacher-pupil interactions. Results of these explorations indicate that CATTS could aid teachers in directing their own behavior toward specific goals. Immediate feedback enabled teachers to regulate themselves during an on-going teaching situation. However, analysis of overall teaching behavior cannot so effectively be incorporated into the system at this time.

Native Language Acquisition and Development

To understand language behavior in normal speakers and listeners, it is necessary to look at the language abilities of such atypical groups as the mentally retarded. Examination of this population of speakers provides some important insights to language behavior. In the mentally retarded language development proceeds at a slower pace than in normals. This lag permits investigators to determine possible language acquisition stages.

Language Development--Mentally Retarded

Mentally retarded children have been found to have deficient learning sets (Semmel & Williams, 1966). They require extra motivation and attention for adequate learning due to this deficit. While normals acquire a great deal of what they know through incidental learning, educable mentally retarded children do not learn this way to any great degree. Instruction must be provided to compensate for the retardates' ineffective incidental learning.

Several studies by Semmel and his associates were concerned with a grammatical analysis of word associations in mentally retarded children (both institutionalized and in public school classes) and normals (Semmel, Barritt, Bennett & Perfetti, 1965, 1966; Semmel & Bennett, 1966). Previous research indicated that children tend to move from sequential responses (syntagmatic responses) to associations falling within the same grammatical class (paradigmatic). This progression from syntagmatic to paradigmatic word associations was suggested as evidence for an increasing grammatical competence in language functioning.

In a word association task a grammatical analysis was undertaken (Semmel, et al., 1965, 1966). Retarded subjects were randomly chosen from institutionalized retarded (I-R) and from public school classes (PS-R). Normals consisted of subgroups selected from a mental age range (MA-N) and a chronological age range (CA-N) both comparable to the two retarded subgroups. Results indicated that the CA-N subgroup gave significantly more associates of the same form class (paradigmatic) than the other three subgroups. The PS-R and MA-N were rather similar in their performance; the I-R group gave fewest paradigmatic responses.

Thus, these results partially confirm the previously reported findings that as children grow older there is a shift from primarily

sequential associations to responses of the same grammatical form class. In addition, these results directly implicate intellectual level as a significant variable in the shift to associations of the same grammatical form class. The difference between PS-R and CA-N and the lack of difference between PS-R and MA-N leads to the conclusion that mental age as well as chronological age appears to play a significant role in the shift from syntagmatic to paradigmatic associations.

In a subsequent study the relationship of paradigmatic free word associations (W-A) to paired associate (P-A) learning was investigated (Semmel, Sitko & Semmel, 1968). Educable mentally retarded boys were grouped as high and low paradigmatic responders on the basis of their responses in a free W-A task. Paired associates were employed which varied in degree of association strength and in the grammatical form-class of their items. The results suggested that EMR boys who are predominantly high-paradigmatic W-A responders are able to utilize both grammatical and associative cues in paired-associate learning, while low paradigmatic EMR boys lack strong habits to avail themselves of their more limited competence in recoding linguistic units into grammatical form classes.

Semmel, et al., in their ongoing studies of the retarded, tabulated oral word association responses of EMR boys to facilitate future research endeavors (Semmel, Sitko, Semmel, 1969). Since the stimulus words were based on an established list of words most commonly used by retarded children (Mein & O'Connor, 1960), these norms provide valuable information for this subject population.

Language Development-Processing Connected Discourse

Rosenberg in a series of studies ranging over a period of about three years and numbering some 20 provided detailed and specific data on various aspects of recall and facilitation in the learning of sentences and sentences in connected discourse. Attempting to control as many extraneous variables in his experiments as possible, he has developed three sets of sentence norms. The first two sets were developed prior to his association with CRLLB. Previously compiled "Associative Sentence Norms" (1965) and "Associative Sentence Norms: Simple Declarative Sentences" (1966) provided the bases for his extensive research at CRLLB. "Norms of Sequential Associative Dependencies in Active Declarative Sentences" (1967), the third set of norms, provided normative data on object nouns most frequently associated with specific verbs. In this set of norms the stimulus sentence frames were of the form: The dog _____ the _____.

Using associatively related words to examine the facilitation of recall of connected discourse, it was found that associatively related words 1) facilitate recall of the associates, and 2) facilitate recall of the passage in general (Rosenberg, 1967a).

Essentially a replication of the above study, a control passage containing high strength R-words (response words) but replacing S-words (stimulus words) with associatively unrelated items yielded an extreme difference between High association (HA) and Control (C) passages (Rosenberg, 1967b). However, there were no significant differences between HA and Low Association (LA) passages or between LA and C passages. The lack of significant difference between LA and C in the recall of pairs indicates that it was not some characteristic of the HA-R words that was responsible for the superiority of Group HA in the recall of pairs. The C group difficulty in recall of S and R words may have been a result of some characteristic or characteristics of the words themselves.

The next step was to determine the source of facilitation in the recall of associates embedded in connected discourse (Rosenberg, 1967c). The HA group was superior in recall for words in pairs in a recognition memory task as they were in recall of connected discourse studies. This finding suggests that to a certain extent HA word pairs embedded in connected discourse may be stored as pairs.

The recall of sentences constructed from pairs of HA and LA associations were prepared using controlled association norms. An intra-list interference task was constructed by pairing the NP of one sentence with VP of another sentence in the same list. The interference condition impeded recall of the sentences for both HA and LA associations.

Grammatical and associative factors in sentence recall were then examined (Rosenberg, 1967d, e). Three independent variables were included: Active vs. Passive sentence type, HA vs. LA, and Animate vs. Inanimate object-noun. For associatively well-integrated sentences neither grammatical function (subject vs. object nouns) nor sentence type (active vs. passive) made any difference in recall. This was not true for LA sentences. The results for sentence recall are interesting in that they demonstrate the importance of a particular variable--word class subcategory--one which has not been studied extensively.

Groups of four associatively related or four associatively unrelated nouns were embedded in connected discourse using identical contexts. Using two methods of retrieval, a written recall test and a paced successive binary recognition-memory test, the facilitating effect of association was demonstrated. In other words, associatively related nouns are stored more efficiently than associatively unrelated nouns and were thus subject to superior recall or recognition.

Turning attention to the production of connected discourse, Ss were provided with lists of associatively related or unrelated nouns and told to write a story that contained the nouns from the experimental lists (Rosenberg, 1967f, g, h). Main findings included: 1) The clusters of key items that appeared in the sentences of the high association (HA) productions were larger than the clusters that appeared in the sentences of the low association (LA) productions, 2) A knowledge of associative

relationships makes it possible to predict which nouns will occur together in the same sentence, and 3) The HA productions tended to be shorter than the LA productions.

Using the same experimental task to extend this area of investigation to syntactic relations, it was found that HA nouns tended to occur as identical constituents of the same underlying sentence, while LA nouns tended to occur in different underlying sentences (Rosenberg, 1967i).

Sentences of controlled association strength (HA vs. LA) were presented in either grammatically correct syntactic structure or randomly (ungrammatical syntactic structure) (Rosenberg, 1968a). Instructions for the recall task required either ordered learning of the string or free-learning. (That is, Learn the string in order or learn the words in any order.) Results indicated that it appears that subjects may recall associatively related words better than associatively unrelated words but have difficulty arranging them in proper order when the words appear in long ungrammatical strings; that the effectiveness of grammatical structure is reduced if subjects are not required to learn and recall items in order; and that instructions appear to be an important variable in serial recall regardless of level of association and grammatical structure. It is clear from the results for total word recall that the effect of learning and recall instructions is upon the serial organization of items in recall and not upon the probability of recall of items. These last results are not consistent with the common observation that free recall is superior to ordered recall in the case of word lists.

Rosenberg's investigations sought to characterize the nature of semantic structure at the level of the sentence and to evaluate the effect of parameters of semantic structures on the storage and retrieval of sentences in verbal learning (Rosenberg, 1968b, c, d, e). Evidence supporting the functional importance of semantic markers and their associated structural relationships could hopefully provide a fresh approach to the problem of evolving a psychologically based "grammar" which critically involves the interface between syntactic and semantic systems.

Language Acquisition

Acquisition of one's native language has been studied at CRLLB. Analysis of the prosody of infant's vocalizing was undertaken by Lane and Sheppard (Sheppard & Lane, 1966a, b; Sheppard, 1967). A later stage of development is examined by McNeill. He is concerned with the form nature of language acquisition by children. Concerned with explaining the rapidity and extent of language acquisition, he provides a theoretical explanation of language acquisition in terms of generative grammar and describes the nature of linguistic universals which influence and direct the acquisition process in children.

Infant Prosody

Infant vocalizing was tape recorded continuously and completely during the first five months of life. Electro-acoustic analysis of samples from this body of infant vocalizations was conducted to provide composite statistics describing three prosodic features of the vocalizing: fundamental frequency, relative amplitude and duration. Developmental changes in the fundamental frequencies of utterances over the first 141 days showed that the average fundamental frequencies of utterances [M(MF] at birth was approximately 438 cps; then it decreased to 411 cps by sample 18 (about 21 days), and remained there until sample 36 (about 45 days); then it rose and stabilized at about 450 cps for the duration of the study. The infant's utterances did not become more variable in pitch as he grew older; approximately two-thirds of the utterances in a typical sample had fundamental frequencies within about ten percent of the mean value. They concluded that the infant's pitch did not fluctuate during an utterance either more or less as he grew older. Variability in amplitude within utterances was greater than the variability in fundamental frequency within utterances.

The arithmetic mean of utterances was approximately 613 msec at birth decreased to 466 msec at 21 days and then rose to about 600 msec at 45 days at which level it remained for the rest of the study. A developmental trend is noteworthy in that there was covariation of average fundamental frequency and average duration. The parameters show a decrease from their initial values, then an increase to a value which exceeded the initial level, and, finally, stability for the duration of the study.

Three possible explanations of these trends are offered: due to chance fluctuations (unlikely since the trend is across measures), physiological development (combination of increases in length, thickness and area of vocal cords and increase in age in the subglottal pressure), and difference in crying vs. non-crying responses (that is, unconditioned reflex crying-responses vs. operant crying-responses controlled by environmental stimuli) and the gradual disappearance of reflexive crying and appearance of motivated crying.

A Theory of Language Acquisition

McNeill's investigations consider the acquisition of language as a question of specifying how children's capacity for language interacts with their linguistic experience--the interaction taking the form of relating the universal aspects of deep structure to the idiosyncratic aspects of the surface structure of language (McNeill, 1966a, b, c, d; 1967a, b, c). He credits children with an inborn capacity for language acquisition, a capacity that consists of expectations as to the general form taken by natural language.

An abstract "Language Acquisition Device" (LAD) is postulated by McNeill. LAD receives a large corpus of speech containing both

grammatical and non-grammatical utterances. Upon receipt of the corpus, LAD creates a grammatical system, which may be regarded as LAD's theory about the regularities that appear in the corpus of speech. With this internalized grammatical system, LAD will allow predictions of which utterances will be grammatical. LAD is then some sort of cognitive mechanism which enables a child to acquire his native language.

To acquire a particular language a child must formulate hypothesis that enable him to produce utterances that are understandable and grammatical. A child's grammar has a set of simple rules and whose output would not be considered grammatical if generated by an adult speaker. Children's utterances are quite short, one to four words, expressing complex ideas. These utterances have been labelled with the generic term telegraphic in that they look very much like reduced adult sentences as one would use in telegrams to save space. For the child the "reduced" form may indeed save space in memory because, although the child can understand longer more complex sentences when spoken by an adult he produces only short utterances. Even when imitating an adult sentence, the child reduces it to a size he can handle.

Elementary children's grammars have been written by several investigators. McNeill compares the grammatical rules that would generate the speech recorded in these studies. These rules appear to develop hierarchically, increasing in complexity as the child matures. In an attempt to validate hypotheses about language acquisition, McNeill studied the spontaneous speech in Japanese children, a language quite different from English. The child's speech had few rules not unlike the rules of the American children studied. Furthermore, the child's earliest speech contained an abstract feature as it must if a linguistic universal reflects an aspect of the fundamental capacity for language.

Transformations must be acquired by the child in order to handle more complex utterances. Data on American, Japanese, and Russian children is provided to indicate that they formulate hypotheses about the regularities observed in parental speech. Needless to say the particular transformations of each language are peculiar to that language. In each language children evaluate their hypotheses against further evidence to enhance their ability to handle specific transformations in their language.

McNeill attacks the application of simple and mediated stimulus-response principles to an explanation of language acquisition. These theories restrict learning to the acquisition of overt responses, at least initially, whereas languages with transformational rules require the acquisition of underlying forms that are never presented overtly in speech. He proposes a biologically based capacity for language: an inborn set of predispositions to develop a grammar of immense complexity and richness on the basis of very small amounts of evidence.

Complex Language Episodes

Studies of analytic and productive skills in complex language episodes were primarily concerned with tagmemic analysis, rhetoric, and paragraph structure (Becker & Young, 1965, 1966; Young, 1968). Several of these studies are part of a continuing effort to develop both a theory of rhetoric based on tagmemic principles and effective pedagogical tools based on the theory. Studies on the nature and application of tagmemic discovery procedure would provide a bridge between investigation of covert, internal operations and studies of overt verbal production, since tagmemic discovery procedure shows certain features of each. The internal component consists of directed research along well-defined lines of inquiry calculated to isolate and analyze problems, to retrieve a maximum amount of relevant information available to the inquirer, and to stimulate the discovery of original ordering principles. In short, the procedure enables one to probe his own fund of knowledge in a systematic and productive manner. This procedure may offer a method for achieving control over what rhetoricians have come to call the "pre-writing stage" of the writing process.

Young (1969) has discussed the absence of motivation for engaging in pre-writing activities. He suggests that an extension of pre-writing activities to include the perception and formulation of problems may enable the teacher to create classroom situations which deal with real problems (relevance), to teach the later stages of the writing process more effectively, and to increase student involvement.

Becker (1967), in his thesis "A Generative Description of English Subject Tagmemes", done in part under the auspices of CRLLB, described the considerable generative capacity of a tagmemic grammar.'

Psychological Studies of the Paragraph

Several studies sought to establish the psychological reality of the paragraph (Koen, 1967; Koen, Becker & Young, 1967). An outgrowth of tagmemic principles, these studies examined the paragraph by presenting passages of expository prose to students. Nonsense words were substituted for all content words in each passage, grammatical endings on words retained, and paragraph indentions removed. Unaltered passages were also presented. Results showed that subjects were able to place indentions in unindented stretches in both English and nonsense versions of prose with a significantly high degree of agreement ($r=.82$) and that semantic cues were not essential to such discriminations in some cases.

To ascertain developmental changes in paragraphing ability, a similar task was presented to elementary, junior and senior high school students (Koen, Becker & Young, 1968). Product-moment correlations increased regularly from the youngest to the oldest age group for both English and nonsense passages. These data are compatible with the idea

that the development of the syntactic system precedes that of the semantic--at least up to a certain point (around 12 years of age). Thus, it may be said that the progress in the processing of formal cues is fairly regular and apparently consists of increasingly finer discriminations of the cues used by adults.

Young, Becker, and Pike (1970) have recently published a book on rhetoric. Concerned in part with work done at CRLLB, a modern theory of rhetoric based on tagmemic principles is presented.

Language Disability

The language behavior of several language disability groups was examined. Many individuals investigated the language functioning in such areas as: aphasia, socio-cultural and socio-economic class differences, schizophrenia, dysarthric speech, mental retardation, dialect differences, and non-standard English.

Specific studies were concerned with such investigations as: comparisons of advantaged and disadvantaged children on productive and receptive language skills (Barritt, Semmel & Weener, 1966; 1967); language training programs for preschool age children of migrant workers (Hagen & Hallahan, 1969); culturally disadvantaged children and speakers of non-standard dialects (Weener, 1965; 1967; Lane, Caroline & Curran, 1967); modification of overt language output of near-mute schizophrenics (Shorkey, 1968; Sundel, 1968; Butterfield, 1970); comprehensibility of dysarthric speech (Rita Tikofsky, 1969); and explorations of linguistic competence of aphasics (R. S. Tikofsky & Reiff, 1967; R. S. Tikofsky, Reiff, Rita Tikofsky, Oakes, Glazer, & McInish, 1967).

Summary

From its conception, the goal of the Center for Research on Language and Language Behavior has been to contribute to the more effective learning, teaching, and use of language by persons of all ages and abilities. The Center carried out basic and applied research of an interdisciplinary nature as well as programs designed to disseminate information. Over 200 interim and final reports of research appeared in periodic progress reports. In addition, Center personnel independently published articles in scholarly journals and presented papers at conferences, symposia, and workshops. Second language pedagogy was advanced by the development of instructional devices and materials which are currently used extensively. Thus research findings were widely disseminated throughout the scientific community. Its international journal of abstracts in the language sciences, Language and Language Behavior Abstracts, coordinates research related to language and language behavior in a central source. The Center for Research on Language and Language Behavior, through hundreds of varied activities and programs, has achieved many of its initially stated goals.

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Partial Listing of Completed Doctoral Dissertations

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Butterfield, W. H. A further examination of the learning behavior of a group of near-mute schizophrenics, 1970.

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